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THE JOURNAL-LANCET

Represents the Medical Profession of
Minnesota, North Dakota, South Dakota, and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations
PUBLISHED TWICE A MONTH

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ANTENATAL INFECTIONS*

By H. B. DORNBLASER, M. D.
MINNEAPOLIS, MINNESOTA

In the course of looking up the subject of antenatal infections, especially pneumonia, I was struck with the bigness of the whole subject of antenatal pathology of which infections are only a part, and of how far reaching are the effects of antenatal disease or accident of one kind or another, on postnatal life. The case I have to report will serve as a text upon which to base a short study of this extremely interesting field of medicine.

Ballantyne defines Antenatal Pathology as that which is concerned with all the morbid processes which act upon the organism before birth, and with the effects which these actions produce. This includes the pathology of the 10 months period of intrauterine life and the effects of pathological processes on the special reproductive cells before these have united together to form the first rudiments of the individual. Further, the doctrine of the continuity of germ plasm pushes back the action of morbid agents beyond the immediate progenitors of the individual, and compels the student of Antenatal Pathology to take into account the medical history of earlier ancestors.

This same idea was voiced by Pinard when he defined Puericulture as the preservation of child life, and divided it into several stages.

1. Preconceptional period, which is the field of the eugenist.
2. Intra-uterine period, which is the field of the obstetrician.
3. Postnatal period, which is the field of the pediatrist.

The obstetrician, therefore, must consider how best he can safeguard the babe in utero against—

1. Intra-uterine death.
2. Premature expulsion—1. Of a non-viable child. 2. Of a viable but premature child.
3. Defects of development.
4. Transmitted intra-uterine disease.
5. Dangers of the birth process.

The earliest literature on this subject is found in the teratological records of Chaldea[2] written in cuneiform character on the brick tablets of the great mound of Koyunjik near the Tigris, containing a long list of monstrous infants, with the divinatory meaning of each, such as the fall of a kingdom, the winning of a battle, the occurrence of a famine, etc.

Aristotle wrote very learnedly about monstrosities, both as to their meaning and the cause of the malformations, while Hippocrates discussed congenital dislocations and morbid heredity in a very admirable manner.

From 300 B. C. to 1700 A. D. the literature was practically of no scientific interest because monstrosities were considered omens of divine anger, etc., but in 1,702 there appeared the first real treatise on fetal disease as distinguished from monstrosities which was presented to the

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*Presented before the Minneapolis Clinical Club, March 17, 1927.

University of Halle for the degree of M.D. by one Düttel.

As man's life may be divided into three periods, so may be the pathological conditions to which he is subjected, and we have antenatal, intranatal, and postnatal diseases. Most of our knowledge of course is of the postnatal variety, but we are becoming better acquainted with the intranatal mainly through the pressure accidents with or without hemorrhage, which affect the baby's head during its birth and which may or may not cause the death of the individual.

It is the antenatal period, of course, with which we are most interested this evening. This has been the most elusive and the most difficult period to study, but more is being learned about it every day.

The following is a scheme of antenatal life as Ballantyne views it, showing that there is no hard and fast boundary between any of the periods of our development, but one overlaps another in its growth.

ANTENATAL PATHOLOGY

1. Fetal—Congenital diseases, diseases of fetus very similar to those of child or adult.
2. Embryonic—Teratology or monstrosities. Morbid agencies acting on embryo produce, not disease, but malformations of embryo.
3. Germinal—Before or shortly after fertilization, sperm as well as germ cells. Probably has to do with double monstrosities, hydatid moles, included fetuses, etc. Heredity.

The antenatal factor has long been noted in such diseases as those of brain and spinal cord, e. g., idiocy, deaf-mutism, epilepsy, and hereditary chorea; in dermatology, in ichthyosis, hypertrichosis, hypotrichosis, albinismus, and the nevi. It is also seen in congenital heart disease, hemophilia, and syphilis. In the field of orthopedics we may enumerate cleft palate, club foot, congenital dislocation of hip and cervical fistulæ.

Some diseases of antenatal origin show themselves in the new-born infant, and then it is easy to trace them to their real origin, but others lie dormant until more adult life and the connection then is not so apparent. In this latter group belong the malformations or congenital diseases of the female generative organs which show themselves in disordered function when these organs take on activity.

Abt, in speaking of germinal infection, says "that actually transmitted in sperm or ovum is questionable, and, with the possible exception of syphilis, probably does not occur. Prenatal infection by way of the placenta, while relatively rare, does occur. Congenital syphilis is the disease most commonly conveyed in this way. Smallpox, measles, pyogenic infections, typhoid, and tuberculosis have also been transmitted to the fetus. Many obstetrical specialists have become convinced that transplacental infection is a common cause of stillbirths."

Dorland reports how numerous drugs pass through the placenta, e. g., morphine was found in the umbilical cord of a parturient morphiomaniac, lead and copper have been found in fetal tissues and caused death of the fetus rather than abortion. Lead produces cerebral lesions and paralysis, while arsenic is found especially in the skin of the fetus but causes abortion from placental hemorrhage. He also states that certain diseases, such as the exanthemata, affect the fetus through placental transmission.

The two theories advanced to explain this are: (1) parasitic and (2) leukocytic.

1. According to this theory the villous epithelium under the action of bacteria loses its function of selectivity due to myxedematous and fibrous degeneration, and allows bacteria and their toxins to pass thru to the fetal circulation.
2. According to the leukocytic theory the maternal leukocytes containing disease are not overpowered by the leukocytes in the placenta, and in this way the disease reaches the fetal circulation.

Williams clarifies the subject by showing that the functions of the syncytium are not only selective, but cause a change similar to that which takes place in the intestine with regard to organic substances. He also states that the chorionic villi, especially the syncytium, contain proteolytic, lipolytic, glycolytic, and desamidizing ferments, which explains the normal transmission of these substances.

The passage of bacteria from maternal to the fetal circulation occurs but rarely except where there is a distinct lesion of the placenta. Exceptionally, however, anthrax, pneumonia, typhoid, relapsing fever, and the usual pyogenic infections have been transmitted in this way. Typhoid bacilli are the chief offenders in this regard.

In 49 autopsies, from 1901-1910, Johnson found 8 per cent pneumonias.

In 32 autopsies, from 1910-1911, Johnson found 42 per cent pneumonias.

Johnson and Meyer in a series of 500 autopsies on still-births and new-born found 97, or 19.4 per cent, giving evidence of pneumonia, and 68, or 13.6 per cent, probably infected before birth. They divide their cases as follows:

1. Antenatal infection—Ante- or intranatal death	30
2. Probably antenatal or intranatal infection—Death usually within three days after birth	38
3. Pneumonia with hyaline membrane (type of asphyxia-neonatorum)	8
4. Postnatal infection	21
	97

Analysis of these cases shows that most of them (Group 1) gave a history of—

1. Premature rupture of the membrane with long dry labor.
2. That bacteria were found most frequently in the cases having the longest dry labors.
3. The bacteria most often found were—1. Cocci resembling staphylococcus or streptococcus. 2. Gram-positive or negative bacilli. It is significant that in none of their cases did they find the pneumococcus.
4. That the placentæ and membranes were acutely inflamed in a number of cases.

The fact that none of their babies was infected in any other way than through nose or mouth makes them take issue with Slemons, who believes that a common path of infection may lie through the amnion to the fetal circulation.

From the symptoms observed, as well as from the pathological bacteriological findings in their second group of cases they feel sure that Hess Thaysen is correct in his belief that nearly all infants dying of pneumonia within three days of life, have had an antenatal infection.

Browne did 80 autopsies on cases of infantile death and found 21 deaths from pneumonia, or 26.25 per cent; 11 cases, or 50 per cent of the deaths, were in prematures, so he figures that if the ratio of premature to full-term babies is as 1-10 then the premature is fourteen times more liable to pneumonia than the full-term child.

The causes found are as follows:

1. B. coli in the great majority of the cases.
2. Staph. aureus.
3. A pneumonia bacillus.
4. No growth (in some cases).
5. Anaphylaxis (acute reaction).

And the predisposing factors are the following:

1. Premature rupture of the membranes.
2. Prematurity.
3. Fetal asphyxia (hyaline membrane).
4. Atelectasis.

With regard to the portals of entry into the lung of the irritating substance there are several. Hess Thaysen's classification is—

1. Diaplacental or transplacental (from mother to child).
2. Aspiration including—
    1. Contents of pathologically infected uterus and vagina.
    2. Secretions from normal birth canal.
    3. Food or secretions in nose or mouth of infants, aspirated after birth.
    4. Vernix caseosa—hyaline membrane.
3. Aërogenous—after birth.
4. Metastatic—as from a primary focus in navel or intestine.

He thought the chief mode was aspiration of virulent organisms from an apparently normal birth canal. However, his examinations did not include the placentæ or membranes or a microscopic examination of fetal tissues. And to these may be added a fifth portal of entry.

5. By continuity. The bacteria may spread from an infected amniotic fluid through a stationary column of fluid and secretion from the nose or mouth down the trachea and bronchi to the lungs.

Nos. 2 (aspiration) and 5 (continuity) presuppose, of course, rupture of the fetal membranes. All observers have noted a relation between the ability to demonstrate bacteria in the amniotic fluid, and the length of time intervening between rupture of the membranes and the delivery of the infant.

From what is known of children being born at full term when the membranes have not prematurely ruptured, showing scars of smallpox, or actually broken out with measles, and of those showing the treponema pallidum in their organs, as well as in their placentæ, we know that the fetus can become infected with disease transplacentally.

By tracings from the abdomen of the pregnant women Ahlfeld thought he showed that a fetus had regular respirations in utero. This, however, can be questioned.

It is generally believed that amniotic fluid normally fills the nose, mouth, and pharynx of the fetus, and I can see no reason why the finding of it in the stomach could be considered pathological, for the child is born with the sucking reflex, and it is very probable that it has performed this act and swallowed amniotic fluid many times in utero. But the epiglottis is supposed to offer a barrier to the entrance of the fluid into the bronchi and lungs. Small amounts are generally found in the lungs of the new-born and may be considered normal, probably representing only the amount of fluid which was present in the nose and mouth, and which was drawn into the lung by the first respiratory movements. But if any appreciable amount of this material is found here, it is evidence of asphyxia of the fetus.

Johnson and Meyer are authority for the statement that this small amount of uncontaminated amniotic fluid in the lung does not seem to cause inflammation because (1) epidermal cells are found there for several days without apparent inflammatory reaction, (2) they are not attacked by phagocytes, (3) they do not provoke the formation of foreign body giant cells, but (4) appear to undergo slow dissolution.

The causes of asphyxia are—

1. Insufficient placental circulation.
2. Compression of, or true knots in, the cord.
3. Excessive uterine contractions.

Whenever any of these forces are operative, the respiratory center is stimulated, and large amounts of amniotic fluid may be demonstrated in the lung by the following methods: (Johnson and Meyer).

1. In sections, liquor amnii, like edema, gives a granular ppt.
2. Numerous cornified squamous epidermal cells are present from the skin of the fetus—a very important finding.
3. Globules of fat from the vernix caseosa.
4. Lanugo hairs.

And on staining the sediment:

1. By Gram's method the epidermal cells are Gram-negative and all other cells red when the section is decolorized with acetone for from three to five seconds and counterstained with safranin.
2. Soudan III stains the fat droplets of vernix.
3. Levaditis stain for the treponema pallidum causes the epidermal cells to take on a dark-brown or black color (Ag.).
4. Yellowish-brown or black masses characteristic of meconium are found upon microscopic examination of amniotic fluid in the bronchi or alveoli.

The gross pathology of the lung is very hard to recognize.

1. The organ may be slightly larger than normal.
2. It may float or sink depending upon the amount of atelectasis present.
3. It is not consolidated but of a fleshy appearance.
4. The cut surface has a reddish, moist appearance, slightly edematous.
5. Pleuritis may be only rarely noted.

Browne's description is as follows (naked-eye appearance of the lung):

The lung appears congested and edematous and feels rubbery and semisolid. On squeezing the cut surface frothy bloody fluid exudes. It generally contains still enough air to enable it to float, though poorly. In the most severe cases, however, the lung or part of it (not necessarily the lower lobes, though these more frequently than the others) may be solid and of liver-like consistence, containing no air and consequently sinking in water if separated from the rest of the lung.

According to Johnson there is still another type which is a disease entity. This is what he calls "acute hemorrhagic pneumonia" in infants. Syphilis and prematurity seem to predispose to this condition. In it there are—

1. Congestion with little or much edema of lungs.
2. Hemorrhage into the alveoli or bronchi. (Blood always is fresh and the amount may be much or little.)
3. There is extravasation into the alveolar walls.
4. There is catarrh of the endothelial cells lining the alveoli. These large cells sometimes contain pigment.

The first stage of the hemorrhagic type is that of lung congestion, general or limited to certain areas. The fragile fetal vessels are unable to stand the strain of the sudden inrush of blood and consequently give way, and blood is poured out into the alveoli and bronchi. The child has generally up to this point appeared to be perfectly well, or at least until within an hour or less of death. Death occurs suddenly, probably due to the hemorrhage, and is immediately preceded by epistaxis. The child is blanched. There is no cyanosis, therefore the blood is of different origin from that found in cases of catarrhal pneumonia where the blood comes from the congested nasal mucous membrane. In the hemorrhagic cases the blood comes from the lung itself, and traces of it may be found on examining the upper air passages. The presence of blood in the alveolar walls of the lung precludes the possibility of that in the alveoli and bronci having been swallowed; besides, on careful examination one can find some capillaries that have been ruptured and from which blood had been flowing when death occurred.

It would seem, therefore, that where—especially in a premature or syphilitic infant in which the vessels are particularly apt to give way under strain—a fairly acute congestion of the lungs occurs, the capillaries in the alveolar walls may give way and suddenly flood the air passages (alveoli and bronchi) with blood, invariably causing sudden death, the only preceding physicial sign being the blanching of the skin and epistaxis.

Under the microscope the usual type shows—

1. Alveolar walls are thickened.
2. Alveoli are poorly distended and contain catarrhal cells.
3. Cells are phagocytic, endothelial only, from the lining of the alveoli. In addition are—
4. R. B. C.—a few.
5. W. B. C.—P. M. N., a few.
6. Lymphocytes—a few.
7. Fibrin—a little.
8. Loose arrangement—a few cells.

A wide distribution of the pneumonic process is due to infection of atelectatic lung tissue over a considerable area. Patchy distribution is due to scantier aspiration of infected material or aëration of lung after birth, or both.

In the cases of "hyaline membrane" Browne describes many dilated alveolar ducts and sacs and some alveoli containing—

1. A hyaline material which takes a reddish color with H and E. It does not give the reaction for fibrin. He thinks it might be due to aspiration of irritating substances, e. g. lysol or soap used in preparing a patient, but the most probable source is epidermal cells or fat from vernix caseosa aspirated from the amniotic fluid sometime previous to labor.

There is a considerable degree of atelectasis of lung tissue, due to—

(1) Prematurity.
(2) Trauma.
(3) Mechanical obstruction of air passages by plugs of vernix caseosa (hyaline).

The course followed in this type of case is usually normal delivery, spontaneous breathing, followed by attacks of cyanosis and dyspnea increasing in frequency and severity until death.

The case which I have to report is that of a woman aged 25, first seen October 1921, because she was suffering from the nausea and vomiting of pregnancy.

P. H. She had the usual diseases of childhood.

C. R., G. I., and G. U., negative.

Menstrual periods began at 13 regular, Q. four weeks with the exception of a short time when they recurred Q. two weeks. She saw a doctor who corrected this. Flow lasts one week, quite profuse on last day, bright red with occasional clots, has headache and a heavy feeling in abdomen, twelve to fifteen hours before the flow begins. This stops when the flow is well established.

E. D. C., June 13, 1922.

P. E., well developed and nourished. B. P. 134-82. Anterior cervical glands enlarged especially on right side;

Low soft systolic bruit at apex and transmitted to left axilla.

Abd., negative except for tenderness from vomiting.

Ext., Measurements: 28.75—30.0—32.5—19.75.

Pelvic: Outlet op. not relaxed, no vaginal discharge, or signs of inflammation, levators strong, cervix softened, canal is closed and points forward and upward in the axis of vagina. Uterus is acutely anteflexed and about twice the size of a non-gravid organ, fairly firm, not tender, and freely movable, adnexæ negative.

Impression: Well-compensated mitral insufficiency.

EARLY PREGNANCY

In November about one month after she had been seen first, she returned from the country, showed for the first time a rather thin, creamy, vaginal discharge. Then the left Bartholin gland was small, but palpable, and she gave a history of its being swollen while she was in the country.

The right gland was the size of a crab-apple and quite tender to pressure. Advised opening abscess, but this was refused.

Urine showed faint trace of albumin and a few W. B. C.

December, right abscess ruptured spontaneously with evacuation of pus, etc.

February, 1922 Pregnancy progressing well. Bartholin glands not troubling.

May, 1922 Left Bartholin gland ruptured and much pus was drained away.

May, 1922, R. O. P., head not eng., but well flexed. T.99.4° P.88. B. P., 122-72. Urine negative except for W. B C.

May, 1922 at a Hospital Bartholin glands were incised and drained and dressings done qd. till June, when right side closed and left side admitted the tip Kelly clamp one-half inch. There was a fair amount of drainage of creamy thin secretion.

R. O. P., head well flexed and engaged H. S. 136 B. P. 118-72

June 13, '22.

4:00 P. M. Labor. R. O. P. head engaged H. S. 128, good quality.

June 14, 12:00 M. Puncture wound in membranes.

6:45 P.M. rupture membranes complete—pains hard.

June 15, 12:00 M. full dilatation. Pituitrin 3 minims.

3:00 P. M. female child delivered spontaneously.

4:45 P. M. Bloody nostrils, artificial respiration, transfusion of whole blood.

6:00 P.M. Death.

An autopsy was granted and done by the University of Minnesota. Their diagnoses were:

1. Multiple subpericardial and subendocardial petechial hemorrhages.
2. Subpleural hemorrhages.
3. Left occipital parietal subperiosteal hemorrhage.
4. Bilateral hemothorax.
5. Pulmonary edema.

6. Microscopic diagnosis (some time later) Pneumonia.

CONCLUSIONS

1. Pneumonia in the new-born is much more frequent than has heretofore been generally appreciated.

2. The probability that a great many of these infections have occurred before the child has left the uterus is proved beyond a doubt. The disease is an important cause of mortality in still-born and new-born infants.

3. Premature rupture of the membranes has a direct bearing on the occurrence of this infection in the fetus in utero because of aspiration of infected amniotic fluid.

4. There are few signs or symptoms which might make known the presence of this disease in the new-born.

5. The new-born infant has very little defensive mechanism to be used in combating this disease.

6. The danger from the disease is disproportionately greater for the child than the mother. Even when it is present the mother may run an entirely afebrile course.

7. Unless a microscopic study of the tissues is made, the presence of the disease may be missed altogether.

8. All placentæ, cords, and membranes should be examined at autopsy.

9. Acute hemorrhagic pneumonia of infants is a clinical and pathologic entity and accounts for the sudden death of many apparently normal, spontaneously delivered infants. It differs from catarrhal pneumonia in that the skin is blanched instead of cyanosed. Death is immediately preceded by epistaxis. The etiology may be organismal or of the nature of an immediate anaphylactic reaction.

10. The means of identification of amniotic fluid in the lung are of importance in the study of fetal pneumonias.

11. Fetal asphyxia is the cause of the presence of large amounts of amniotic fluid in the lung.

12. Aspiration of uncontaminated amniotic fluid usually does not cause an inflammatory reaction.

13. Aspiration of vernix caseosa and epidermal cells may cause asphyxia neonatorum.

14. Premature infants frequently die of pneumonia from the aspiration of food.

15. It is extremely important to avoid premature rupture of the membranes during labor and to protect the new-born child against infection.

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THE DIAGNOSIS OF MALINGERING*

By Edwin A. Riley, B.C.E., M.D.

PARK FALLS, WISCONSIN

There are three principal motives for malingering:

First. For financial gain, as among workmen under compensation acts or persons provided with insurance.

Second. For the escape from duty, as among soldiers and sailors.

Third. For gaining sympathy, most frequent among women whose home life is unpleasant.

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*Presented before the Seventeenth Annual Meeting of the Minneapolis, St. Paul & Sault Ste. Marie Railway Surgical Association, at Chicago, Illinois.

Men feign accident more frequently than women. Women feign sickness more frequently than men.

Malingering occurs among all races and nationalities, but is most pronounced among the Russian Poles and Irish of the white race, and the American negroes of the colored races. The malingerer may exaggerate existing injuries or diseases. He may feign a single symptom, group of symptoms, or an entire disease. He may feign an injury for an existing disease. He may claim that a pathological condition is due to recent injury, when in reality it is due to an old injury.

I will discuss, briefly, the detection of each of these feigned conditions:

Detection of feigned pain.—Severe pain has a few apparent signs: the anxious facies, the depression, and the perspiration. If a patient suspected of feigning pain is given one-fourth grain of morphine hypodermically he may admit that the pain is relieved. However, he often admits that the pain is relieved almost immediately, which is not possibly due to the morphine. If he does not admit that the pain is relieved in an hour, the one-fourth grain of morphine is repeated. If he still insists that the pain is not relieved our suspicion of malingering is increased, for there are few pains that are not relieved fairly well by one-half grain of morphine. Among these are the pain of a perforated gastric ulcer, renal colic, and tic douloureux. These can usually be eliminated by other signs than pain. A malingerer who has had a few hypodermics of morphine and has admitted that the pain was relieved thereby, will often be as promptly relieved by a hypodermic of water. Oftentimes a hypodermic of apomorphine will relieve a feigned pain. The theory is that the malingerer is so busy with the nausea that he forgets about the pain, or else he fears a repetition of the apomorphine.

Another ruse I have often resorted to is to lead the patient on by suggestion until he admits and declares that he has pain in almost every organ and part of the body. As the mathematician would say,—*Reductio ad absurdum.*

Feigned fever.—There is but one rule needed for the detection of feigned fever—don't let the patient tamper with the thermometer.

Feigned hemorrhage.—The patient may actually induce some bleeding. This is usually done by picking or lacerating the mucous membrane of the mouth, nose, or throat. A careful examination will often locate the lesion from which the blood is coming. He may substitute a red fluid for blood. The microscope will determine whether or not blood is present.

Feigned unconsciousness.—The malingerer of unconsciousness may often be aroused by pressure on the supra-orbital nerves, by touching with the actual cautery, or by arousing his anger by making derogatory statements about him.

Feigned paralysis.—This may be detected by touching with the cautery or a sharp instrument. Under a general anesthetic the part said to be paralyzed will often move. Hoover's sign is valuable in detecting feigned paralysis of one leg. Hoover has shown that when a normal person lying on his back endeavors to lift the extended leg from the couch, the opposite leg is pressed downward, and that in an organic hemiplegia the same pressure occurs when the patient tries to lift the paralyzed leg. In a hysterical or feigned paralysis, if the patient be told to raise the paralyzed leg there is no movement on the non-paralyzed side.

Feigned diseases.—The feigner of epilepsy does not have the attacks except in the presence of observers. He does not bite his tongue or otherwise injure himself when he falls.

In feigned rheumatism there is lacking the red and swollen joints. The temperature is normal. Salicylates do not relieve the pain.

Feigned insanity is many times most difficult of detection. Careful, prolonged observation is about the only means of arriving at a conclusion. Many times prisoners of war have so successfully feigned insanity as to be exchanged as incurable.

Appendicitis may be successfully feigned. The absence of fever and the shifting of the point of tenderness should put the physician on his guard.

Workmen from the woods are sent to the hospital suffering from rheumatism, but claiming the condition to be due to injury. High temperature and multiplicity of lesions usually enable us to make the diagnosis. Occasionally men in the early stages of herpes zoster claim injury. The appearance of the eruption bares the attempted deception. In all cases of suspected malingering, unobserved inspection is of the utmost importance.

I will report, briefly, a few cases illustrating some of the points discussed.

Case 1.—An example of feigned pain. A woman, aged 35, had complained for several months of attacks of severe abdominal pain. She had been treated by many physicians without relief. I saw her in consultation about midnight on December 1, 1921. Her physician had been in constant attendance for six hours. He had given her two one-fourth grain doses of morphine, the last one about ten o'clock P. M. with no relief from the two doses. We gave her at once 1/20 grain of apomorphine hypodermically. In a few minutes nausea began, and the pain was entirely relieved. For appearance sake she had a few light attacks of pain afterwards. For two years now she has been entirely free from pain.

CASE 2.—Feigning hemorrhage, unconsciousness, and paralysis. The star malingerer of my experience was a deserter from the German navy, who, on arrival at the hospital, showed evidence of bleeding from the mouth, and was unconscious. The next morning he improved. In a week he had a second hemorrhage, followed by a few hours of unconsciousness. A few days later he developed a paralysis of one leg below the knee. By this time we were quite sure he was malingering. We informed him that the proper treatment for the paralyzed leg was the actual cautery. He consented to the treatment. With the actual cautery we burned the leg severly. He gave no sign of pain, nor did he move the leg in the least, but in three days he recovered and went to work. He recovered from the paralysis much sooner than from the treatment.

CASE 3.—Feigning appendicitis. In December, 1918, a soldier was sent to the army hospital, with the diagnosis of appendicitis. The receiving medical officer sent for me to examine the patient before sending him to the surgical ward. He had all the signs and symptoms of appendicitis. Even his temperature was up to 100.° I concurred in the diagnosis of appendicitis. As we were preparing for operation the patient confessed that he was "faking," as he expressed it. In this case the fever was the final factor that led me into error.

CASE 4.—The last case is one which I erroneously diagnosed feigned paralysis. A woodman was sent to the hospital with the history of having been struck on the head by a falling limb about twelve hours previously. He had a scalp wound which had been sutured by another surgeon before reaching the hospital. Examination revealed no fracture of the skull or vertebræ. His pulse, temperature, and respiration were normal, and his mind was clear. He claimed paralysis of both legs and both arms. Under unobserved inspection only slight motion of the right arm was detected. Called to see him in consultation, I expressed the opinion that he was malingering. That night he died.

DISCUSSION

MR. HERBERT G. RICHARDSON (Minneapolis, Minn.): A farmer was in a collision. He was, of course, somewhat shaken up and bruised, and our own doctors concluded that he had paralysis in one leg. They stuck needles into him and made other tests. I do not know whether or not they seared him with red-hot irons, but they tried the electric current on him. The railroad paid $4,500 to the man's attorneys. Three or four weeks after the money was paid the man was seen diligently plowing on the farm.

On reading the complaint in the case of an injured brakeman one got the impression that he was so severely injured that he would never be able to do another stroke of work. It was a hand-hold case. He claimed to have a sacro-iliac sprain and other injuries of his back. After several doctors had thoroughly examined him and estimated the period of disability from three months to a year, we were able to settle for $3,000. Six weeks later he was working.

Those things are discouraging to the members of the Law and Claim Departments. It does seem as if, in a larger percentage of cases, physicians ought to be able to discover whether or not a man is a malingerer.

We might go on and enumerate a number of cases of malingering.

An interesting case is that of a fakir who claimed that he was thrown to the floor of the caboose in which he was riding, injuring his back, and causing partial paralysis of his legs. The fact of the matter was that he and his chum were imbibing good corn juice, and he did not fall down at all. We had to trace him a bit, and among other things it was learned that one evening he went into a saloon and the bar-tender asked, "What is the matter that you have to use crutches?" Being in a hilarious mood the man replied, "Oh, hell! there's nothing the matter with me," threw his crutches on the floor and proceeded to dance, saying that they had sued the Soo Line Company and would make a barrel of money out of it. The matter was reported to us, and as a result the claimant did not get anything.

We shall always have malingerers and it is in your power to assist us very materially in determining truth from fiction.

DR. DANIEL D. MURRAY (Duluth, Minn.): A man stumbled over a valise and dropped to the floor. He claimed to be paralyzed in both legs. He was taken to the hospital, and for two months he was apparently paralyzed. The railway surgeon, and nurses made up their minds that he was not paralyzed.

Another physician, called in by the railroad, insisted that the man was paralyzed. The railroad officials did not accept the conclusions of their own surgeon, and paid the claimant $5,000. Eighteen months afterwards he was located in a hospital in Seattle, apparently paralyzed in both legs and trying to settle with a railroad company. He was proved then and there to be a malingerer, and given eight years in the penitentiary.

DR. JOHN H. RISHMILLER (Minneapolis, Minn.): This subject is the most discouraging to a surgeon whose major work is traumatic surgery and particularly if he is a surgeon for a large corporation which has good financial standing. The injured employes who cause the most trouble and energy to satisfy as to settlement of their claims are the ones who are in a line of work where there is no promotion, mainly itinerant switchmen who are moving with the sun; in the summer they are in a northern climate and in the winter they are in a southern climate. Whenever they are injured their ailment is a thousand times magnified. Not only that, but all previous injuries which the recent injury has indirectly affected, are invariably taken into consideration.

When one is requested to make an examination for the Legal Department and when a surgeon asks what complaints the patient has he enumerates an unusually long number, and very few do not include sore back and vertigo. In other words, his complaints are subjective and practically none are objective. When a surgeon is requested to make a medicolegal examination it is well to go into the matter minutely, asking the patient about all his previous sickness and injuries, whether or not he has been in the hospital or had an operation, and asking him who his family physician is, as these may lead to a clue for getting a correct line on previous trouble. It is well to ask the patient, "What do you complain of to-day?" and let him delineate all his complaints, making notation as the patient rehearses them. I cite a case in question:

Complains to-day that:

1. He has soreness and pain through small of back, pointing with both hands.
2. His neck hurts him, pointing with hand to back of neck.
3. Right heel bothers him quite a little and right ankle also bothers him. Fleshy part of heel has not quite healed up yet.
4. After he was injured he was "short-winded," and spat blood for about two weeks.
5. Chest is practically well, but once in a while he has oppressive feeling (catching) in front of the chest, more on left side than right.
6. He had wound on upper outside right thigh, which does not bother him at present.

Then he should be completely undressed and every region systematically examined and notations made as one goes along with the examination. Then after one has completed the examination the surgeon should go over the patient's different complaints, as they are written down, and draw his conclusions as to the reality of the patient's complaints. Then let the surgeon draw his conclusions as to the subjective complaints and objective findings. The examination should be systematic, complete, and couched in such language that the trial attorney can obtain a correct idea as to the surgeon's conclusions.

Litigation cases exaggerate all symptoms, and an experienced surgeon will be able to draw his conclusions as to whether or not the patient's complaints harmonize with the general principles of physiology and neurology. If the patient's subjective complaints do not dovetail with our understanding of applied anatomy and practical surgery, we must, to a large degree, size the patient up as magnifying his symptoms for the benefit of plaintiff's attorney.

A good term for "exaggerated subjective symptoms" is a designation of "litigation symptoms." A malingerer is never satisfied with medical and surgical treatment. It does not make any difference what one does for him, and he never improves. The claimed symptoms are either getting worse or not improved at all, and very often a different train of symptoms develops in his own estimation, so that a surgeon has a great problem for solution whenever he is requested to make a complete examination and draw a candid surgical opinion from the slight objective and from the exaggerated subjective complaints presented.

Dr. David J. Twohig (Fond du Lac, Wis.): A man was thrown off a car, sustaining a fracture of the laminæ of two of the lumbar vertebræ as shown by *x*-rays. There was paralysis of the lower extremities and marked contusion of the back. About two weeks afterwards we went in and raised the fracture. It came up in good position, and we could not see any reason why there should be permanent disability. But that fellow remained paralyzed and started suit. The case dragged along for two years. Just before the trial we looked him over. There was no sign of paralysis. I said to him: "I believe you are a faker, and I shall so testify." That same day his attorney settled for $7,500. Seven months afterwards I met this man going deer-hunting.

Dr. John Steele Barnes (Milwaukee, Wis.): Dr. Riley has referred to the use of suggestion in suspected cases of malingering. We have found it very effective in detecting malingerers of vision. We all know that it is pretty hard to find out whether a man is actually seeing or not. We have, of course, ways of catching a man if he has not been well informed by some unscrupulous doctor or lawyer as to the means that are used for the detection of malingering as to vision.

A man sued for a large amount of money, claiming that his eyesight was gone. The patient was sent to an eye specialist, who used all known means in an attempt to prove that this man could see. We saw the patient in consultation. We suggested one thing and another and finally succeeded in convincing the boy that we thoroughly believed he could not see. But we soon discovered what the other oculist had already detected, namely: That the boy had been coached by some one, whether his doctor or the doctor and the lawyer combined, but he certainly knew everything that we knew in the matter of testing vision, and we could not catch him. After convincing him that we believed he could not see we commenced to mix him up by covering first one eye and then the other, saying, "You are seeing with this eye" and "You are seeing with this eye" until he became confused. Then all at once I covered the good eye and said, "Now you are seeing with the good eye," and asked him to read the chart. He proceeded to do so, and read the 20/20 line of the chart correctly. The case was withdrawn.

Dr. John V. R. Lyman (Eau Claire, Wis.): A man fell off the tender of a locomotive, striking on his head and receiving a severe gash in the scalp. There was no fracture. The wound was sewed up, and within a week the man was apparently well. Six months later the attorney for the road asked if the injury was severe. I told him that the man had sustained only a scalp wound, and he made a good recovery. The attorney stated that the man had started suit against the company for $50,000, claiming that he was paralyzed on the left side, the same side as the injury. Within a day or two following this talk with the attorney for the company I was subpenaed by the other side to give testimony in the case, and I made examination of the patient. I thoroughly tested the man out for the reaction of degeneration, especially with electricity. He complained of complete loss of sensation on the left side of the body from the top of the head to the sole of the foot, and he also claimed to have perverted taste. In putting sour on one side of the tongue he would say it was sweet, and in putting sweet on the other side of the tongue he would say it was sour. He also complained of urinary symptoms, and he had a spastic gait. I went into court, and the attorney for the road said, "Didn't you tell me a few weeks ago that this man had not received a serious injury? How do you explain it?" I told him that I had made a recent examination of the man and found the conditions as presented. He then requested the court to adjourn until the following day so that he could have a neurologist make an examination. The neurologist made his tests and then went on the witness-stand and substantiated the finding of anesthesia. The Court asked for his opinion as to the permanency of the condition, and the witness said it was not permanent. The Court then asked if he had ever had a similar case, and the witness replied: "I have not, but such hysterical conditions have been reported in the French literature." The plaintiff recovered $7,500 from the railroad company, and two months later was doing hard manual labor.

Dr. Riley (closing): The psychiatrist in the 33d Division of the Army, in all cases that came in with lame back gave us opportunity to treat the condition with the electric cautery. Under that treatment they would all straighten up in a very short time.

I was much pleased to hear Dr. Barnes' discussion in regard to the malingering of injuries of the eye. The railroads and armies have always had malingering to contend with, and since the enactment of compensation laws we find it is more common than formerly was the case.

THE SECOND NORTHWEST CONFERENCE FOR CHILD HEALTH AND PARENT EDUCATION

By Richard Olding Beard, M.D.

Professor Emeritus, University of Minnesota, Executive Secretary to the Conference

Rapidly the emphasis is shifting in the mind of the people and, to a degree, in the mind of the medical profession, from the sick human being to the well human being. The periodic health examination clinic is destined to anticipate and gradually replace the diagnostic clinic. Its primary objective is not the discovery of disease, but the discovery of health. Its purpose is not merely disease prevention but health promotion.

And, naturally, the point at which health promotion gives the greatest promise is the point of life's beginnings; and so we are hearing much nowadays of the pre-natal mother and the hope which attaches to the well-being of her unborn child. Then interest centers deeply in the newborn babe and in the life-saving propaganda for breast-feeding. And so we go on to "the muling and puling infant" of Shakespeare's lines, only that after the fashion of the new gospel of child-health it "mules and pules" no longer. Follows, then, the pre-school run-about, in whom we recognize the highest possibilities of health betterment and the greatest liability to the development of problems; and the school child, to whom an organized educational system has naturally paid the more attention in the past; and, finally, the adolescent,—another puzzle of the present, in whose welfare so much remains to be worked out.

It is one of the hopeful signs of any civilization that its social interest centers in posterity, —in the children of the rising generations. So we get the key to one of the major movements of our time. The human mind is creative. Human action follows in the line of human thinking. We say that we move in the path of least resistance. What is really true is that we move in the direction of opening opportunity. We fancy, sometimes, that things just happen and we find ourselves puzzled to account for their happening. In fact, they are the product of our own thinking, the fruit of the educational development of our day. They constitute the actional response to a definite social demand.

So it is that we have witnessed a remarkable progress of recent years in the science and art of pediatrics; that we see in it the one major field of medicine which is consciously transferring its chief interest from the sick to the well,—which, whether consciously or not, is making human health betterment its aim and end.

So it is that the agencies of infant and child welfare have sprung up, in one form or another, all over the land and are invoking the means not of remedying but of preventing the diseases of childhood, of putting into practice the principles of child health.

So it is that psychologists, sociologists, educators, public health nurses, social workers, are devoting themselves to the several phases of child study,—are setting themselves to the solution of the many problems of physical health, of mental hygiene, of social relationship as applied to the young child. So it is, too, that institutes of child welfare, child study associations, and the like, are serving as the mechanisms of research and teaching.

So it is that, within the past decade or two, parent-teacher associations have been formed in many communities and in practically every state of the Union, in which child welfare serves as the binding cement of a common social interest.

So it is that in the last two or three years, in some few great centers of population, great gatherings of many mothers, of a few fathers (too sadly few in number), and of teachers, the foster parents of the children, have been held to encourage among the people the idea of parent education through the medium of child study in the home, in the family, the school and the community.

In March, 1927, such a gathering, great indeed in point of numbers, but greater still in the social consciousness of its gathered people; great in the power of the message its teachers, "speaking with authority and not as the scribes," delivered to them,—was held in Minneapolis, under the name of The Northwest Conference for Child Health and Parent Education.

So deep was the impress it made upon the minds of this and neighboring communities that its repetition has been repeatedly discussed. Recently, a number of organizations in Saint Paul have asked that it be staged this year in that city, a proposal in which its former Minneapolis sponsors have concurred. The project has been already launched under the invited directorship of the writer, who conducted last year's Conference.

On Wednesday, December 28, a meeting of the representatives of no less than one hundred and twenty institutions, under state, county, or twin city support, sponsoring the Conference, was held at the Saint Paul Athletic Club, at which its organization was completed; a generously over-subscribed guaranty fund was announced; the meeting place of the Conference at the Saint Paul Auditorium was selected, and its dates fixed as March 27, 28 and 29, 1928.

A program of new speakers,—men and women, nationally or internationally known in this field,—will be arranged.

The gathering at the Second Northwest Conference for Child Health and Parent Education bids fair to be even greater than that at last year's Conference. Its promoters sincerely hope that it will be far greater in the interest it awakens and the active support it receives from the medical profession of the Twin Cities and of this and neighboring States.

There is no question that the consciousness of the people at large is more widely awakened than ever before to the value of human health and, in particular, to the value of health, as the living hope of the future, in the child.

It is health in a wider, fuller sense than the term has hitherto implied. It is the conception of *positive health*,—of the remedial treatment of illness necessarily; of the prevention of disease, alike by immunization, where scientific procedure is well established, and by early discovery as a means to timely preventive hygiene; but, yet more is it *positive health* by promotion,—by health betterment, physically, mentally, socially studied.

It is a program big in vision, big with the promise of results. It is a popular, rather than a professional, program. And yet is is a public health program, in the realization of which, physicians—trained to disease diagnosis and prevention, to health preservation and to health promotion, should be among the leaders and the educators of the people.

For this cause, the appeal is, first of all, to the profession of medicine. Its members in Minnesota and in neighboring states are urged to respond to this invitation to lend a hand in enlarging the thought and contributing to the achievement of parent education,—for it is the parent, after all, who, adequately educated, will bring into being and mold into effective living the better child. An urgent invitation is extended to every physician within reach of the Conference to attend its sessions.

The appeal is, secondarily, but far more widely, to the parent, to whom this education is to be given, by whom it is in growing demand. And this appeal should extend, not only to the mother, but to the father. It is painful to find how feebly the responsibility of the father for the development of the child has been invoked; how much more feebly he has responded to this the most urgent call to duty he ever receives. Surely, he, together with the mother of his child, can well afford the sacrifice of time required to reach such a Conference and to attend at least some part of its sessions. Upon the mother, the appeal does not have to be urged. She knows her need!

The appeal, again, is to teachers, of every name and function, who mother or father the children, as all true teachers do, for the many hours of every school day. To be familiar with the subject to be taught, to understand the principles and the practice of teaching, to be trained in the technic of the use of the materials of instruction, all of these seem to go nowadays as a matter of course,—but to know the nature of the child, a nature developing year by year; to appreciate the progress and to measure the stages of his growth in body, in mind, in spirit and in social relationship, to gain the wisdom to give the child room as he grows "to burgeon out of all within him" these are far greater gifts, in the attainment of which the teacher needs to share with the parent the opportunities of child study, the understanding of child development.

And, finally, the appeal to society, within which the child is to stand or fall, for the economic, moral and spiritual support of the Child Health and Parent Education Conference! In its corporate or organized forms, society should *send* its representatives, as physicians, mothers, teachers, and public health nurses, (upon whom so much of the missionary work of the health program depends), to attendance upon these Conference sessions, to share in the opportunity of education they afford, to carry back to their communities the new and larger light by which these little ones of the present and the coming generations may the better grow.

BOOK NOTICES

Electrothermic Methods (Desiccation and Coagulation) in the Treatment of Neoplastic Diseases. Designed as a Practical Handbook of Surgical Electrotherapy for the Use of Practitioners and Students. By J. Douglas Morgan, B. A., M. D., Formerly Radiologist, Ross Pavillion, Royal Victoria Hospital, Montreal; Instructor in Radiology, University of Pennsylvania Graduate School of Medicine, Philadelphia, etc. 172 pages, cloth, illustrated. Price $2.50. F. A. Davis Company, Publishers, Philadelphia, 1926.

Morgan's Electrothermic Methods, a book of 159 pages of the hand-book type, is a clear, concise treatise dealing with the elementary concepts of the application of destructive electrical currents in the field of surgery.

The first four chapters present simple, clear cut definitions and discussions of apparatus. The remainder of the book deals largely with electrodesiccation and electrocoagulation.

The discussion is conservative, well handled, and gives the interested reader a birdseye view of the subject.

Wm. P. Sadler, M.D.

Should We Be Vaccinated? A survey of the controversy in its historical and scientific aspects. By Bernard J. Stern, Instructor of Sociology, Columbia University. 146 pp. New York and London: Harper & Brothers, Publishers, 1927.

This small volume written by an instructor in sociology consists of a survey of the smallpox vaccination controversy in its historical and scientific aspects.

Starting after Jenner's publication, in 1797, the author shows that bitter opposition developed almost at once. In part, the objections were the result of personal feeling against Jenner, because of his rather unfortunate militantly aggressive personality; in part, they were entirely sincere and based on various grounds. The legitimate objections arose chiefly for the following reasons: first, some cases of infections resulted due to carelessness and lack of understanding of the method. The opposition magnified the dangers, and very early the public was appealed to and graphic descriptions were given of leprosy, syphilis, and other diseases transmitted by vaccination. Second, many of the scientific writers opposed the practice, due to false medical concepts, as, for instance, Moseley, who contended that inoculation with cow-pox could not exterminate smallpox because smallpox was an atmospheric disease . Third, doubt was thrown upon the permanency and the efficiency of vaccination and the occasional cases developing smallpox after vaccination were widely cited.

Vaccination was introduced into this country in 1800 by Waterhouse, and the earliest opposition undoubtedly arose as a result of Waterhouse's eccentric and controversial personality and unpopular religious and political affiliations. He had many personal enemies and the attempt to make vaccination compulsory aroused bitter antagonism on the part of his political opponents, and vaccination became an issue before the public. With the tremendous lack of comprehension of even the most elementary facts the public became an easy prey for the antivaccinationists. Thus the antivaccination movement began and persisted in this country as shown by these facts. Before 1850 free vaccination had been made obligatory or optional in five states. By 1900 only thirteen more had been added and seventeen more in the next quarter century. Furthermore the activity of the antivaccination organization is shown by the fact that bills are being introduced repeatedly to repeal existing vaccination laws.

In more recent years, the author points out, the antivaccination organization has added to its forces the various faddists, such as physical culturists, dietists, and others, and in the majority of cases the vaccination controversy serves as an entering wedge to facilitate the acceptance of patent cures and nostrums.

The author concludes with the following interesting analysis showing the serious results of the antivaccination movement. In New York, where the sentiment against vaccination is not very strong, the death rate from smallpox is 0.05 per 1,000, whereas in Minnesota, where sentiment is more pronounced, the rate is 2.46, or nearly fifty times as great.

—M. H. Nathanson, M.D.

THE
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PROGRAM OF THE PUBLIC HEALTH MEETING IN MINNEAPOLIS

This was really a conference on the public health relations, and as one glances over the program one sees the name of some men of distinction, notably, Dr. Edward H. Skinner, of Kansas City, who was instrumental in helping us get the A. M. A. convention for Minneapolis. He had a very interesting talk on the medical profession and how they solved their questions in Kansas City. Dr. Skinner thinks the medical profession has lagged in the matter of public relations. That may be true in a certain sense of the word, but when one considers the enormous amount of work the medical profession does in its various departments, as Dr. Skinner has done in the Section on Radiology of which he is the chairman, it is sometimes questionable whether the medical profession should be blamed or praised. Dr. Skinner believes in publicity, as does the editor of THE JOURNAL-LANCET, and as do most of the public health men.

Among the speakers, too, was Mr. Carl W. Jones, of Minneapolis, the general manager of the *Minneapolis Journal*, who talked on the medical profession from the newspaper viewpoint. It is very gratifying to have Mr. Jones among the 75 members of the Minnesota State Medical Association in its Bureau of Public Health present so that he can really see, from a newspaper point, that the medical profession is interested. It is to be hoped that Mr. Jones' interest will continue and that he will publish more news from the medical profession.

The other speakers included Dr. John M. Dodson, of Chicago, Executive Secretary of the Bureau of Health and Public Instruction of the A. M. A. Dr. Dodson believes, too, that the name only of the speaker or writer should be given in radio and newspaper talks, but under the guidance of a committee from a state or county medical society. He states further that the main state medical association co-operates closely with the state medical department, the manufacturers association, the tuberculosis association, the federation of labor, agricultural organizations, and other similar bodies in control of clinics and public education. Dr. Dodson is always an interesting speaker, and in spite of the fact that his train was very late he was a very welcome addition to the program.

Mr. H. A. Bellows, manager of WCCO, talked on the suggestions for bettering the public relations, and he was followed later by Mr. L. J. Seymour, production manager of the radio station WCCO. Mr. Seymour believes very decidedly in publicity, and he goes further than a good many physicians do; he believes that the radio talks which are given by the medical association would be much more interesting if the speaker's name was mentioned. Again the editor agrees with his form of publicity. But the larger number of medical men are afraid, apparently, to have their names mentioned, by themselves or by the introducer, for fear some other physician will feel badly about it. Mr. Seymour urged the fact that while the listeners would be mildly interested in what the committee of the Minnesota State Medical Association would say, they would be keenly interested if they knew that some special man, whether they had heard of him or not, was talking—under his own name; that the farmer in the country would wake up to the fact that there was really a medical man behind the speech.

F. Denton White, D.D.S., Minneapolis, chairman of the Committee on Oral Hygiene, spoke on the dental profession and its relation to the public. And our good Herman Johnson, of Dawson, who has been much interested in the Minnesota State Medical Association and has been chairman of the Committee on Public Policy and Legislation, talked on the subject of the relation of the medical profession to the legislature.

Dr. F. J. Savage, of St. Paul, president of the Ramsey County Medical Society, and one of the councilors of the Minnesota State Medical Association, talked on the history and necessity for better knowledge of our relation to the public.

But the man who entertained us most was F. J. Kelly, Dean of Administration of the University of Minnesota, who talked on the physician's debt to the public. The writer was very much entertained by his public utterances on what the doctor owed the public. He gave three or four of his theories about this question and emphasized very seriously how much the doctor owes the public until the writer became rather amused, for Dean Kelly never once mentioned the fact that the public owes the doctor, which is much more than the cost of his being educated or partly educated by the State. It seemed never to have entered Dean Kelly's mind that the public is so commonly in the debt of the doctor that he must have thought it purely a perfunctory matter. If he had any idea of the work and energy expended by the medical profession, the number of things they are called on to do, the times they are called out to administer to the sick and suffering, the numerous times when they operate on poor people, and take care of emergency cases at any hospital in the middle of the night (usually a winter night and a bad one) for nothing, or if he knew anything about how much the public owes in money to the doctor, he would have spoken in a different vein. Finally there was some discussion on the subject and some of the members present did not agree with Dean Kelly in his estimate of the indebtedness or where it really belonged. If he had an opportunity to investigate the doctors' books he would find that a general practitioner in the course of his work has at the present time on his ledger sums ranging from $1,000 to $80,000 or $100,000 of which he can never get a cent. The people are so accustomed to beating the doctor out of his fee, thinking, as Dean Kelly does, that the doctor owes everything to the public, that they forget the public owes most everything they have acquired in public health or in medical or surgical work to the doctor. There is much more to say on this subject, but it would involve too long an article to fully criticize Dean Kelly's attitude.

UNDETERMINED PROGNOSES

It is very easy, sometimes, to make a diagnosis, and all of us are more or less concerned about being proficient in it, and all of us should be interested enough to make a careful examination, which we usually do not. We take too much for granted. We have had experience enough to think we can tell at a glance what has happened to the patient, but we are not shrewd enough to know that the patient is dissatisfied with a cursory examination and ultimately goes to someone who makes a careful examination or at least impresses the patient that he has done so; and, although he may not be as well equipped as some of his medical brethren, he has a way with him that appeals to the sick, to the patient undergoing examination. We all know of men who listen to the heart for five, ten, or fifteen minutes at a time before they decide what the trouble is, or whether there is any trouble. They make other examinations in a similar way, long, painstaking (they think), and impressive, when, as a matter of fact, those of us who have worked in dispensaries and those of us who have seen enough of the work done in Europe can see at a glance that the man who is making the examination sometimes makes his diagnosis before he examines the patient,—and he may be right about it, too. But we have to earn our fee by a much more elaborate process. Do we all take into consideration all the physical and mental findings of the patient before we decide on, first, what kind of a patient we have, and next, has he a disease? The latter, of course, is of secondary importance to the patient.

Now what are we going to say about the prognoses? It is a well-known fact that a great many patients like to be told that they are very sick, particularly nervous people, and that they must have certain care and must be looked after in a very definite way. There are a great many people suffering from physical disorders who like to know and like to feel that their illness is of the greatest importance, but we cannot always tell them why it is important. For instance, it is a difficult proposition to tell a nervous patient that he or she has a cardiovascular-renal disorder. We think we know that it is a very important thing, and yet when we look back we can recall a number of people who have lived long beyond our expectations because they had the physical and mental determination or resistance which keeps them alive. We fall into error very often over accident cases. We think that a man or a woman who suffers a crushing blow of either the spine or the cranium must, of necessity, be in a very decidedly incurable state.

We think it might be a good thing for all doctors to read "Annie Oakley, Woman at Arms," by Courtney Cooper Riley, published by Duffield, the price of which is $2.50. It is one of those books we used to dream about when we were young; to think that Annie Oakley was the greatest sharpshooter in the world! Of course, there used to be a great deal of sentimentality about her because as a small child fate threw upon her the task of supporting her widowed mother and some sickly sisters and brothers on a poverty-stricken farm in Darke County, Ohio. She was too small to cultivate the land, and she began quail shooting, but soon found that shooting was beyond her strength and skill so she resorted to homemade traps. But she got a lot of fun out of the job. She learned how to get the quail into the trap, and then began to shoot with an old family musket which was taller than herself and almost as heavy. She was finally farmed out to a family in a distant county, but she soon discovered that her portion was to be drudgery and mistreatment. Then she began a series of wanderings over the country, earning her living and the living for her mother by shooting birds. Later some crafty chap matched her to shoot for a wager against a famous rifle shot, and although it was her first contest of this sort, as well as her first public appearance, and her first visit to a great city, she won the match and added the wager to the family income. She afterwards married the man she defeated. Probably the poor chap was afraid of his life! She kept on with her shooting. She became eventually a woman matured and celebrated before she ceased her brief sojourns at educational institutions, but she fulfilled her childhood ambition. She first joined a circus, but she disapproved of the conduct there. Then she joined Buffalo Bill's show and speedily became famous. But here is what we have been coming to. On the eve of her appearance in New York she suffered a painful accident which incapacitated her and which really endangered her life. In the face of the doctor's warnings that to keep the New York engagement meant death, Annie Oakley joined the opening parade, rode seventeen miles on horseback through the cheering crowds, then collapsed and was taken to her quarters to die. However, four days later, worn with suffering and shaky as she was, she appeared in the arena and went perfectly through her performance. Later she was matched against an English champion, and just before the match she injured her hand so badly that fourteen stitches were necessary. The Englishman tried to claim the match by default, whereat Annie Oakley, in agony and risking permanent mutilation, appeared on time and tied with him. Years afterward, in England, she beat him. Seven years later she was pulled unconscious and dying from the wreckage of a passenger train in North Carolina; she survived, but this time it was definitely announced that she could never shoot or compete again. She went through five operations and three years later was back in the arena defending her title as champion rifle shot of the world. Finally, at 62, an automobile accident maimed her, apparently beyond hope; again her doctor announced her permanent retirement. And the following year she broke the Mayview Manor Gun Club record with a score of 98 out of 100 pigeons.

This is what the doctors get for making bad prognoses; their patients come back to them after injuries and numerous surgical operations and flaunt their prognoses in their faces.

The reviewer of this book goes on to say that Annie Oakley was a little sister to Joan of Arc, to Robert Bruce, to Grant, to all those who, no matter what their sex or walk in life, have shaken the world because in the clash between destiny and will their wills could not bend and destiny itself had to give way.

THE PEOPLE LIKE TO BE MISINFORMED

It is impossible to keep track or check up on all of the people who delight in lecturing before the public, particularly if they have a new brand of fake to offer. The proper place for the display and dissemination of this misinformation is usually at the hotels in the larger cities. There, through the medium of the hotel or through the medium of a clever advertiser the information seeps through to the public that something new and startling has been discovered for various aches and pains and illnesses of all sorts, or even misadvice as to business investments by tea-ground readings.

The boldest thing that has come to our attention recently in one of our progressive western cities was that of a man who gave a free lecture in the large meeting-room of one of the hotels. He had with him a large chart of the human body, such as is used in medical schools or dissecting rooms to show the locations of the various organs of the body. He even succeeded in pointing out the location of the brain, and, among other things, he called attention to the position of the tonsils, the lungs, the liver, and the kidneys, and the pelvic organs. This is as far as he cared to go because the rest of the anatomy is largely muscular and bony structure. After telling his hearers of a number of things that might afflict them—and he told it in such a way that every one of his hearers could select his own theory in regard to his own illness,—he summed up these various illnesses and ailments and told his audience that there were but few things that would cure this sort of thing. The principal cure was a small hammer with which they were to hammer their small cervical vertebræ (from the fifth to the seventh); they were to tap over this area gently until they were accustomed to it, each time striking a little harder but being careful not to injure themselves. He evidently advised a certain type of hammer, presumably a neurologist's hammer with a rubber end or tip so that no other damage could be inflicted. He failed to tell his hearers to buy a large sledge hammer and give themselves a few good sterling whacks, or have someone do it for them, over the same area. This, of course, would be the preferable method as it would reduce any dislocations that might be in that vicinity and would thus permanently cure the disease.

After getting off this bit of wisdom about this nice little hammer, he told them it was very simple to cure a cold. His instructions were to gather the three first fingers of the left hand firmly with the right hand, then to put out their tongue and close their teeth upon the tongue firmly, and then by a little twisting movement of the three enclosed fingers they would find their cold had disappeared. Some of his hearers actually believed him. He said nothing about infection or exposure as a possible means of spreading infection and thus producing a cold. That is evidently a bygone theory.

This lecturer then launched into a discourse upon the pelvic organs, and he evidently got something mixed because he talked very learnedly, seemingly, on the prostate gland as being the sole apparatus, the only gland, which produced virility. He did not mention that such glands were not found in women, but he offered a substitute by saying that women had glandular structures in the vicinity which had a similar effect in producing virility. In addition to this he has a lady (perhaps someone who is related to him) give a lecture to women only on the things they should know. The speculation arises as to whether mothers are sending their daughters to such imposters for information when they can get much more definite information from various health authorities, including the family physician.

One of the warmest propositions the writer has heard of was that of a man who lectured on what he called applied psychology, and after his first free lecture he formed classes, usually classes of fifty, to each of whom he made a charge of fifty dollars for the course of instruction. Among the smartest things and probably the one that made the most telling hit was that of telling each woman she should take a teaspoonful of epsom salts and a glass of water before breakfast every morning. He suggested this because it pepped up the system, it stirred up the chemical ingredients of the blood, and it incidentally producd an evacuation of the bowels, all of which was a bright idea, because a good many of the women are naturally more or less constipated, and to have a simple remedy like a dose of salts clean out their intestinal tract would naturally stimulate their nervous activities, that is, they would feel more receptive to gather information; and they would hold it more securely because they thought they could think more clearly, and thus they derived an enormous amount of benefit from this man and his applied psychology. Yet physicians take years of time and years of study in learning and acquiring knowledge even before they can start out on the road to the practice of medicine. Six or seven years are now devoted to the making of a doctor, and yet these fakers who prey upon the credulity of the people can go around without license, rent a hall or occupy the lounge-room or dining-hall of an hotel and present themselves as filled with information which they desire to unload on an unsuspecting people. We are treated to Indians, Egyptians, and men from the field of the occult who talk in rapturous tones about things which not one in a hundred of their audience would understand; yet they are listened to with rapt attention merely because their hearers do not think, for in the first place they have not much to think with and in the next place they are so paralyzed and dumbfounded by the large words which they do not understand they think they are gaining information. No wonder Puck says, "What fools these mortals be."

CORRESPONDENCE

A YOUNG COUNTRY DOCTOR'S VIEW

To the Editor:

The article in the December 1st issue of The Journal-Lancet on "What is Wrong with the General Practitioner?" by an Old Country Doctor, interested me greatly. After reading the article a couple of times I would like to give a few ideas on this most interesting and important topic from "The Young Country Doctor."

My location is in a true rural community, thirty miles to the nearest doctor south, west, and east of me, and twenty miles north. There are probably only a few of these true rural towns where the distance is so great to the nearest physician.

In the way of education I am probably as well educated and prepared to take care of the work as the average young man to-day, and am a graduate of an A1 school with a year of internship in a large Eastern hospital (standardized) to my credit. I have been located here about two years at this writing and can readily see why the younger men are keeping away from the country practice. I say thirty miles to the nearest doctor, which means about forty minutes to every farmer in my community, for they all drive better cars than perhaps some doctors drive.

The article by the "Old Doctor" shows he is fast slipping from the respect and consideration he once had and deserves. The young man has nothing to lose along this line, as he does not get this consideration and respect, no matter how good or bad he may go about his work. In order to practice in a rural community to-day one must throw away his polish of an excellent education and internship and be so called "hard boiled."

As the Doctor said in his article, the lay mind has the erroneous idea that all first-class doctors are in the city, and even when they do not know anything about the young man in the country they take it for granted that if he was any good he would not be in the small town. I do not believe that the young man to-day, if he thinks twice, would locate in a small town or rural community and put up with the grief he surely meets in practicing among a number of non-thinking, but perhaps good, honest people. These good people do not care about the number of degrees one may hold, the school one may be from, so long as you are a "Good Doc" and do well with all your patients. They will resort to every known means of saving the life of their child from calling two or three physicians at one time to loading the patient in their car and taking him to our friend the Chiropractor. The Chiropractor who is he? They go to him by the thousands from the rural communities all over the country. He must have the stuff, at least he convinces the general public he has and charges them for his services. In South Dakota we have a Chiropractor center or clinic at a place called Marion Junction to whom practically every physician's patients in this State have gone or will go the first chance they get and the roads are open. Whose fault is it that these cults exist? It is the fault of the general public, legislation, and perhaps to some extent the doctors. Those fellows have salesmanship and plenty of it and get it across to the general public. The general public likes the mysterious in this age of miracles. Why do not those fellows get out in the mud and snowstorms to take care of the sick and injured? Because they can sit back and let the public come to them. We need not knock him as apparently he is a big asset to the community and perhaps we can learn a few things from him, at least one thing, he has taught the easy going M.D. and that is how to collect fees. Your patient and my patient will have his debt to us put on account, but will go directly to the Chiropractor and pay as he enters. The best way to meet this competition, if it can be called such, is to let the public get filled up on his ignorance and pay for their experience and nearly every time they will return to your office with their story. Why, if the Chiropractor has eighteen months of training and the M.D. has had eighteen years or more of training, does the general public turn their heads toward these fellows? Plenty of answers can be given by every M.D. why this condition exists. As the "Old Doctor" says: The rural community does not get behind their M.D. No matter what caliber of man he may be, he used to get the support of every person in the community. This condition has changed, and I doubt if it will ever return, due to new modes of transportation and several other reasons. The rural community to-day thinks more of its bootlegger than it does of its local M. D.

The "Old Doctor" states that there is no competition in the country, and to which I disagree, as he has the competition of the above mentioned Chiropractor and one has to convince the community that he is as good as the city M. D., which is nearly impossible without facilities to work with and no hospital accommodations. Let the Chiropractor have one successful case and the whole rural community gets behind him; but let the M. D. have a dozen successful cases, and they take it as a matter of course.

Another reason why the M.D. is not locating in the country is that he is not equipped to handle surgery. He drives out twenty miles in his community, makes a diagnosis of a ruptured ectopic pregnancy, or of an acute appendix, as the case may be, and what is he to do? He sends the patient to the surgeon in the city and often the "Country Doctor" not only may lose the family as patients but also a nice fee for his life-saving diagnosis and advice. I ask in all fairness to every M. D., should not the country doctor's fee in these cases be as much as the surgeon's? Impossible, of course, so the young man dislikes the country for these reasons.

The young man of to-day is not offered a house, light, garage, etc., to stay with the rural community like the older men were nor is he welcomed with open arms to come and stay in our community. We need you and will give you anything you ask. No, it is far from this, and so the young man is now locating in the city where in ten years he may have a practice worth while.

I believe the time is not far away when one cannot find one high-class doctor in the rural community and the few above mentioned conditions and several more are driving him to the city.

Very fraternally,

A Young Country Doctor

MISCELLANY

DOCTOR EMERY H. BAYLEY—AN APPRECIATION

Emery Herbert Bayley, M.D., obtained his preliminary education at Greeley High School and University of Colorado, graduated from Rush Medical College, Chicago, in 1893, served one year at Asbury Hospital, Minneapolis, and located in Lake City, Minnesota, April first, 1894.

He become a member of the Wabasha County Medical Society in 1895, served as its president in 1899 and again in 1913. He was a member of the Minnesota State, the American Medical Association, and of several other medical and public health organizations.

During his professional career he contributed a number of papers to medical journals, was an active practitioner, and prominent in public health work; was for many years County Health Officer, and to the time of his death, City Health Officer for Lake City. Since its inception, in 1911, he has been president of the governing body of Buena Vista Sanatorium, the Wabasha County sanatorium for the tuberculous.

Doctor Bayley has also been an active participant in civic affairs, having held positions on the school board, on the board of trustees of the Congregational Church, and in the various fraternal organizations of which he was a member.

It goes without saying that he was a man of the highest character, and ever lived up to the best ethical standards in his personal and professional contacts.

The officers of the Wabasha County Medical Society feel they can render no more fitting tribute to their departed member than to cite his professional history and achievements; nor can we offer any better sympathy to the bereaved family than to point to his record and quote his oft repeated wish that he might continue in the midst of his activities until death.

Like the "Country Doctor" of whom Will Carleton sang:

"In the night-time or the day-time, he would rally brave and well,
"Though the summer lark was fifing, or the frozen lances fell;

"Knowing if he won the battle, they would praise their Maker's name.
"Knowing if he lost the battle, then the doctor was to blame.

"'Twas the brave old virtuous doctor,
"'Twas the good old family doctor
"'Twas the faithful country doctor—fighting stoutly all the same."

W. F. Wilson, M.D.,
Secretary Wabasha County
Medical Society.

NEWS ITEMS

The Veterans' Bureau Hospital, of Fort Snelling, though only a few month old, has a waiting list.

Physicians' liquor-dispensing permits are being scrutinized by U. S. Government officials as never before.

Dr. L. A. Fied has moved from Fosston to Ada and become associated with Dr. J. T. Shelland, of Ada.

Dr. H. P. Sawyer, of the firm of Drs. Sawyer and Dewey, of Goodhue, has sold his interest in the firm to Dr. Dewey and will retire.

Dr. H. A. Tash, of Butte, Mont., was elected president of the Butte Kiwanis' Club of that city at their annual meeting last month.

Dr. Joel C. Swanson, of Clifford, N. D., has gone to Rochester, Minn., to spend several months in postgraduate work in the Mayo Clinic.

Dr. E. H. Bayley, of Lake City, died on December 19, at the age of 62. "An Appreciation" of Dr. Bayley appears on this page.

St. Raphael's Hospital, of St. Cloud, built by the Sisters of the Order of St. Benedict, will open for admission of patients on February 1.

The State Board of Health of the State of Minnesota will make every reasonable effort in their power to stop stream pollution in Minnesota.

It is announced that the Veterans' Hospital at Fort Madison, Mont., will remain under the control of the Government at least until July 1, 1929.

The free clinics held by the superintendents of the State Tuberculosis Sanatoria of the Northwest are doing a work of prevention of inestimable value.

Dr. Emil S. Geist, of Minneapolis, has admitted to partnership with him Dr. Myron O. Henry, his former associate, in the practice of orthopedic surgery.

A verdict of $13,000 against Dr. L. H. Kermott, Minot, N. D., obtained in a damage suit for negligence has been set aside by the Supreme Court of that state, and means, of course, the end of the suit.

The Abbott Hospital, of Minneapolis, will erect an addition to its present building that will increase the capacity of the hospital by 95 beds.

The cost of the new unit will be several hundred thousand dollars.

Dr. H. J. Bartron, of Watertown, S. D., has been appointed by the Governor of the State to fill the unexpired term of Dr. R. D. Alway on the State Board of Health. Dr. Alway is doing postgraduate work in Europe.

Governor Christianson of Minnesota has reappointed three members of the State Board of Health whose terms of office just expired, namely: Dr. L. P. Wolf, St. Paul; Dr. S. Marx White, Minneapolis; and Dr. O. F. Melby, Thief River Falls.

A determined effort is being made in the city hospitals of St. Paul and Minneapolis to compel patients in these hospitals to pay for their care and treatment when abundantly able to do so. The abuse of free city hospital privileges works an injustice of great magnitude and should be corrected.

A thorough investigation into the responsibility for the death of a baby in the Minneapolis General Hospital in August last from steam inhalation given in the course of treatment, absolves the Hospital management from blame, but fails to fix the responsibility because of the conflicting testimony.

Dr. Frederic W. Schlutz, head of the Department of Pediatrics, School of Medicine, University of Minnesota, has returned from Havana, Cuba, where he went as a delegate to the Pan-American Child Health Congress and to present a paper on the reduction of the summer infant mortality rate.

A strenuous effort is being made by the City Council of Minneapolis and the Regents of the University of Minnesota to make possible the acceptance of a handsome gift of money by the Education Board of the Rockefeller Foundation. It involves the location of the City Hospital on or near the Campus of the University.

At its annual meeting, held at Faribault last month, the Rice County Medical Society elected the following officers: President, Dr. P. A. Smith, Faribault; vice-president, Dr. W. E. Wilson, Northfield; secretary-treasurer, Dr. C. J. Plonske, Faribault. The physicians of Kenyon became affiliated with the Rice County Society.

At the annual meeting of the Sioux Falls District Medical Society of South Dakota, held at Sioux Falls, S. D., last month, the following officers were elected: President, Dr. J. B. Gregg, Sioux Falls; vice-president, Dr. A. S. Ridea, Flandreau; secretary-treasurer, Dr. L. J. Pankow, Sioux Falls; delegate, Dr. L. G. Parke, Sioux Falls.

At the annual meeting of the Waseca County Medical Society last month the secretary was instructed to open correspondence with the Steele County Society looking to a consolidation of the two societies. The Waseca County Society elected the following officers for 1928: President, Dr. H. A. McIntyre; vice-president, Dr. B. A. Leonard; secretary-treasurer, Dr. Q. J. Swanson (re-elected).

COMMITTEES OF THE MINNESOTA STATE MEDICAL ASSOCIATION FOR 1928

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Coolidge X-Ray Tube for Sale

A slightly used Coolidge X-Ray Tube of medium focus is offered for $80.00. Address 435, care of this office.

Office Position

A graduate nurse desires to return to office work. Is a competent stenographer. Address 422, care of this office.

Work or Position Wanted

I am a Minnesota graduate, class of '26, and desire a location, locum tenens work, association, or surgical opening. Address 438, care of this office.

Substitute Work Wanted

By an experienced physician graduate of a high-grade medical school and licensed in Minnesota. Address 433, care of this office.

Association Wanted

Association wanted with group or individual. Capable of general and urological surgery. Training in eastern hospitals, teaching and practice. Address 431, care of this office.

Office Position Wanted

By a young woman with over two years training as nurse; some stenography; and good recommendations from hospital. Moderate wages. Address 441, care of this office.

Office Position in Minneapolis Wanted

By a woman of large experience in physicians' office. A high-grade stenographer and expert in history-taking, capable of managing a large clinic or a specialist's work. Satisfactory references given. Address 434, care of this office.

Practice for Sale

A good practice and complete equipment in a county-seat town in Central Minnesota; population 2,000. Rich farming community; several churches and best of schools. Reason for selling, am going to specialize. Address 439, care of this office.

Physician's Office Equipment for Sale

The office equipment of the late Dr. E. M. Clay, of Hutchinson, Minn., including therapeutic lamp, violet ray machine, optical case, and office supplies, is offered for sale. Also a good opening for a physician. Address Mrs. E. M. Clay, Hutchinson, Minn

Office Position Wanted

By a graduate of the Commercial Department of a District High School with several years experience as legal and medical stenographer, the latter engagement being with a well-known firm of physicians. Can also keep books and take care of office. Address 440, care of this office.

Physician Wanted

Graduate of Class A Medical College and with good surgical internship to assist in general industrial practice of medicine on the Iron Range, Minnesota. Initial salary $200 to $300 per month. Tell everything employer should know about you in first letter. Photo and references. Address 425, care of this office.

Apparatus for Sale

Complete *X*-ray equipment, including Acme-International 6-60 generator, standard radio and fluoroscopic tilt table, standard stereoscope, two Coolidge tubes, latest type Bucky diaphragm, and other accessories, all in first-class condition. Price very reasonable for quick sale. Address 429, care of this office.

Eye, Ear, Nose and Throat Assistant or Associate Wanted

Competent eye, ear, nose and throat man as assistant to established specialist, eastern South Dakota. Reasonable salary to start, partnership offer later. Full information on receipt of details as to age, nationality, family, health, training, experience, and salary expected first year. Address 427, care of this office.

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NEW DEVELOPMENTS IN THE TREATMENT OF PEPTIC ULCER, WITH NOTES ON THE PREOPERATIVE CARE AND MANAGEMENT OF COMPLICATIONS*

By ANDREW B. RIVERS, M. D.
Division of Medicine, Mayo Clinic
ROCHESTER, MINNESOTA

Peptic ulcer is a common disease. Hargis and Robertson, in a routine study of material from 2,000 necropsies, found evidence of healed or active duodenal ulcer in 237 instances, that is, in about 12 per cent of all necropsies. In addition to this 141 gastric ulcers were found. In 7 per cent of all these cases both gastric and duodenal ulcers were present. It is interesting to note that 21 per cent of the duodenal ulcers and 40 per cent of the gastric ulcers were healed. Of still greater importance is the fact that in 6.4 per cent of these cases ulcer was not even suspected. The apparently increasing number of these cases emphasizes the necessity of early diagnosis and prompt institution of treatment. Haste to institute treatment should not prejudice accurate diagnosis. Most cases of chronic dyspepsia are, at one time or another, diagnosed as peptic ulcer. Medical treatment of ulcers which are not present is wasted effort at best, but operation in such cases is to be deprecated the more so if gastro-enterostomy is performed in spite of the absence of ulcer on exploration. Accuracy in the diagnosis of peptic ulcer, and especially the early recognition of its complications, is a prerequisite to rational treatment. In only 30 per cent of the cases of peptic ulcer was the diagnosis correctly established before the patient was admitted. In only 10 per cent was fairly adequate treatment established.

Once the diagnosis is indubitably established intensive treatment should be insisted on. If medical regimen is to be tried out then a carefully planned course of treatment must be strictly followed. Half-hearted, careless or indifferent methods of treatment result only in temporary palliation and as far as permanent results are concerned, except in rare instances, are absolutely worthless.

Surgery offers the better chance of a quick and permanent cure, but there are some cases in which medical treatment gives entirely satisfactory results.

During the last year I observed 169 cases of peptic ulcer in which medical treatment was carried out. Medical treatment was undertaken frequently at the behest of the surgeon, and it was thought best to proceed with such a regimen because of the youth of the patient, the mildness of the clinical course, the unwillingness on the part of the patient to accept operation, the obesity or senility and occasionally because some co-existing disease rendered surgical interference hazardous.

There are probably as many methods or modifications of methods for the medical treatment of peptic ulcer as there are men treating it. So long as the fundamental principles underlying these methods are correct, treatment will probably be beneficial. I believe there are two extremely important requirements in the treatment of ulcer: the ulcer must be given a chance to heal, and all possible sources of infection which could have given rise to the ulcer should be eliminated.

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The control of pain and the institution of the healing process seem to be intimately associated with marked reduction in the acidity of the gastric contents. This is true whether the lesion is treated medically or surgically. Recently I have shown[12] that in a series of cases of ulcer which recurred after operation the curve of acidity was scarcely affected by whatever surgical procedure was instituted to cure the primary lesions. The importance of this is evident since successful gastro-enterostomy is followed by a reduction of about 60 per cent in the acidity of the stomach.[18]

Control of hyperacidity depends on certain physiologic conditions which affect the curve of the gastric acids. We know that the free hydrochloric acid excreted by the gastric glands is in but one concentration. The essential cause of hyperacidity, according to Bolton, is deficiency in the neutralizing process. The neutralizing factor of primary importance, according to this observer, is the duodenal juice. In order to account for hyperacidity, therefore, we must assume a condition which prevents the regurgitation of a normal quantity of normally alkaline duodenal juices into the stomach. Since the pyloric sphincter supplies the only known control of regurgitation, hyperacidity would result from a disturbance in the rhythmic smooth pyloric action. This could be related to some disturbing factor involving the sympathetic and parasympathetic nervous systems. During periods of stress, worry, fatigue, and nervous excitability it is extremely difficult to control gastric acidity, and this may be because at such times the nervous imbalance prevents the normal relaxation and contraction of the pylorus. These theories seem reasonable and may be applied in a practical way. The control of hyperacidity in a worried, fatigued patient is practically impossible. It seems important, therefore, that all conditions which produce a state of excitement and its consequent disturbance of pyloric function should be avoided and that every effort be made to encourage the patient and to make him as comfortable and happy as possible. Environmental conditions are important. Pleasant surroundings frequently leave an imprint on the patient's morale. Shortly after coming into the hospital he is taught the principles of the treatment of ulcer. He knows why he must co-operate fully in order to obtain the greatest good from the regimen. He is encouraged to discuss his treatment with others on the same diet. Thus those who have learned the importance of co-operation teach others who have just arrived.

TABULATION

Formerly it was customary to keep the patient at least one week on each of the diets shown in the tabulation. It was found, however, that the acids usually remain controlled and the patient free from symptoms in spite of the rather rapidly increased amount of food taken. Ordinarily the ambulant diet is not advised until after or about fifteen to eighteen days. The period of treatment is usually completed in about three weeks. During the first week the patient is kept in bed, and the stomach is aspirated daily; after that aspirations are made every second day. This enables one to judge fairly accurately what progress is being made. Changes in diet and alkalis depend largely on the results of titration. If the acids remain low the diet is increased rapidly. The stool is tested for occult blood at intervals of three or four days to obtain other evidence of the progress of the patient.

THE USE OF ALKALIS

Several years ago Hardt and I described a syndrome which occasionally arose during the treatment of ulcer with alkalis. Since then Gatewood has also pointed out the dangers of large doses of alkalis.

In 1915, Sippy, in discussing his treatment for gastric and duodenal ulcer, wrote: "It may be helpful to know that in rare instances it has required the equivalent of 30 grains (2 gm.) each of calcium carbonate and soda bicarbonate every hour midway between feedings and every half hour after the last feeding until 9:00 P. M., to control the free acidity." This amounts to a total of about 500 grains alkali each day. Until a few years ago I used the alkalis about as Sippy recommended.

In about a third of the cases (under this regimen) which we studied for a considerable time, toxic manifestations developed. The clinical signs of this complication were distaste for milk, nausea, headache, dizziness, vomiting, and at times prostration. Chemical changes in the blood were observed while these symptoms were

TABULATION

DIET AND ALKALIZATION TREATMENT OF PEPTIC ULCER

		Cm.		Gm.		Gm.		Gm.		Gm.	
	Carbohydrates	90	Carbohydrates	150	Carbohydrates	217	Carbohydrates	246	Carbohydrates	246	Ambulatory diet for patients with ulcer:
	Protein	54	Protein	64	Protein	86	Protein	89	Protein	97	Alkalis: Powder I, 1 hr. before meals. Powder II, 1 hr. after meals. Suggested diet:
	Fat	261	Fat	268	Fat	307	Fat	307	Fat	160	
	Calories	2,925	Calories	3,268	Calories	3,975	Calories	4,103	Calories	2,812	
	First week		Second week		Third week		Fourth week				
	Milk	Cream	Milk	Cream	Milk	Cream	Milk	Cream			
a. m.	c.c.	c.c.	c.c.	c.c.	c.c.	c.c.	c.c.	c.c.			
7:00	60	60	60	60	60	60	60	60			
7:30	Powder 1*		Powder 1		.Powder I		Powder 1				
8:00	60	60	Cooked cereal 120 gm.		Cooked cereal 120 gm.		Stewed fruit 90 gm.				Stewed fruit 90 gm.
8:30	Powder II**		Cream 75 c.c.		Cream 75 c.c.		Cooked cereal 120 gm.				Cooked cereal 180 gm.
9:00	60	60	Sugar 4 gm.		Sugar 6 gm.		Cream 75 c.c.				Cream 90 c.c.
9:30	Powder I				Toast, 1 large slice Butter, 1 square Soft cooked egg		Sugar 4 gm. Toast, 1 large slice Butter, 1 square Soft cooked egg 4 gm. orange juice diluted. Kaffee Hag 1 cup				Sugar 4 gm. Toast, 1 large slice Butter, 1 square One soft cooked egg Kaffee Hag or postum Sweet orange juice diluted, ½ orange
			Milk and cream feedings same as first week								
10:00	60	60									Milk, 1 glass
10:30	Powder II										
11:00	60	60									
11:30	Powder 1										
12:00	60	60	Cream soup 180 gm.		Cream soup 180 gm.		Cream soup 180 gm.				Cream vegetable soup or puree 180 gm. Baked white meat of chicken, 60 gm. Baked potato Cooked vegetable, chopped fine, 12 gm. Toast, 1 large slice. Butter, 2 squares. Milk, 1 glass.
12:30	Powder II		Custard 90 gm.		Baked potato		Baked potato				
1:00	60	60			Toast, 1 large slice		Vegetable puree				
1:30	Powder I				Butter, 1 square		Toast, 1 large slice				
2:00	60	60			Custard 90 gm.		Butter, 1 square				
2:30	Powder II						Jello with custard sauce				
3:00	60	60	Milk and cream feedings same as first week								
3:30	Powder I										
4:00	60	60									Milk, 1 glass
4:30	Powder II										
5:00	60	60									
5:30	Powder 1										
6:00	60	60	Cooked cereal 120 gm.		Creamed rice 120 gm.		Cooked cereal 120 gm.				Creamed rice 120 gm. Poached egg on toast Cooked vegetables, chopped fine, 12 gm. Stewed fruit 90 gm. Milk, 1 glass. Toast, 1 slice. Butter, 1 square
6:30	Powder II		Cream 75 c.c.		Toast, 1 large slice		Poached egg on toast				
7:00	60	60	Sugar 4 gm.		Butter, 1 square		Vegetable puree				
7:30	Powder 1				Soft cooked egg		Toast, 1 small slice				
8:00	60	60			Jello, whipped cream		Butter, 1 square				
8:30	Powder II						Stewed fruit 90 gm.				
9:00	60	60	Milk and cream feedings same as first week								Milk, 1 glass

* 0.5 gm. calcium carbonate and 0.3 gm. sodium bicarbonate.

** 0.5 gm. calcium carbonate and 0.4 gm. calcium magnesium.

present. The blood urea was increased and the carbon dioxide-combining power of the plasma was found to be considerably above normal. Signs of renal involvement were definite. There were cases in which the blood urea had mounted as high as 400 mg. for each 100 c.c. of blood, and in which the carbon dioxide-combining power of the plasma had risen to 117 volumes per cent.

When a patient who has been getting along well and is taking milk without difficulty begins to complain of headache or that the milk is sour it is advisable to reduce the amount of alkali. If this is not sufficient to control the symptoms, the alkali must be discontinued entirely; it is then advisable to change the diet to an ordinary soft one, including some fresh fruits and fruit juices. The milk between meals should be discontinued. In more severe cases glucose, 10 per cent, and sodium chloride, 1 per cent, by proctoclysis have been found useful in re-establishing the blood to normal chemically.

Because alkalis cannot be used indiscriminately it was decided to use smaller amounts, one-eighth to one-fourth of the amount previously advised. The results were surprisingly good. There has been less difficulty in controlling gastric acidity, and alkalemia has been completely avoided. Frequently only three or four grains of alkali are required each hour to keep the hydrochloric content of the gastric juice under control when the patient is in the hospital. This probably depends on the irritating effect of larger doses of alkali on the gastric mucosa. Thus increased output of gastric juice is stimulated; this in turn requires more duodenal juice and alkali for its neutralization.

At times the most intensive type of medical management fails to accomplish the first requirement in the treatment of ulcer, that is the marked reduction of acidity. If after several weeks of excellent co-operation on the part of the patient the acidity remains high, the outlook for a medical cure is not encouraging, and I believe that in many of these cases operation will have to be resorted to before permanent cure can be accomplished. It should be mentioned here that a good result does not depend on total neutralization of gastric acidity.

There are other cases in which a well executed regimen fails to relieve the patient's symptoms even though the hydrochloric acid in the gastric titration was reduced or absent. Here again operation seems advisable since in all probability either the ulcer is complicated by perforation or obstruction, or cholecystitis or appendicitis is present, as well.

In some cases it is difficult to control the distress which comes on at night as a result of hypersecretion. This can usually be abolished by aspirating the gastric contents for several nights, and giving 5 or 10 grains of alkali with several ounces of milk before the patient retires. I have found that an ounce of mineral oil or other aperient given at 9:00 P. M sometimes alleviates the distress when other measures fail.

THE USE OF BELLADONNA, SEDATIVES, CATHARTICS, AND SO FORTH

Because of its relaxing effect on the pylorus, I have been using belladonna in most of my cases. The tincture is ordinarily given in 10-minim doses three times a day. I believe that it is easier to control acidity when belladonna is used. Since it seems desirable to get complete relaxation, small amounts of bromides or phenobarbital are used if the patient is restless and sleeps poorly. The care of the bowels is also of great importance. It does not seem to make much difference what kind of preparations are used. I prefer an oil. Retention enemas of oil are also of value, especially if rectal impaction occurs. This was a frequent complication when large amounts of calcium carbonate and bismuth were used in the attempt to control gastric acidity, but is now seldom encountered.

THE REMOVAL OF FOCI OF INFECTION

It is generally accepted that the most important factor in the medical treatment of peptic ulcer is thorough eradication of all possible sources of focal infection. This procedure is now a routine in the Clinic, whether the ulcer is treated medically or surgically. The causal relationship between focal infection and ulcer has been much discussed during recent years. That foci of infection can have an important bearing on the establishment of peptic lesions seems to be questioned by only a few at the present time.

Rosenow, Meisser, and others have shown that certain strains of streptococci seem to have special affinity for gastric and duodenal tissues. When injected intravenously into animals, these micro-organisms will produce acute lesions in the upper gastro-intestinal tract. Meisser has shown how organisms from dental infections in cases of peptic ulcer, after inoculation into the dental root canal in dogs, have resulted in the prompt formation of ulcers scattered through the stomach and duodenum. Recently

I have shown how focal infection can furnish the underlying cause in certain cases of acute hemorrhagic ulcers of the stomach or duodenum or about the gastro-enterostomy opening.

In many respects the etiology of peptic ulcer is still obscure, and there are some cases in which focal infection seems to play no part whatsoever. It seems to me, however, that it would be unreasonable and dangerous to fail to apply what the laboratories demonstrate and which seem to apply in such a large number of cases.

If removal of the tonsils is desirable, it is customary to advise this surgical procedure before the institution of the milk-and-alkali regimen. Convalescence from the tonsillectomy thus occurs during the first or second week of special diet, which consists mostly of milk, custard, and cereals, and should not unduly irritate the healing throat.

The removal of infected teeth can be accomplished nicely without interruption of the hospital regimen. It is safer to proceed slowly in the removal of teeth. If there are many teeth to be extracted it would seem advisable to remove them a few at a time. A brief flare-up of symptoms is often noticed after several teeth have been removed.

Von Lackum has shown that the prostate can be as important in harboring the ulcer-producing streptococcus as the tonsils. No case has been thoroughly investigated unless the prostate has been carefully examined digitally and its secretions examined microscopically; nor has any case of ulcer been treated with absolute thoroughness until all such prostatic infection has been cured.

TREATMENT OF RECURRING OR REACTIVATED ULCERS FOLLOWING OPERATION

There is a small group of cases in which secondary ulcers develop, or the original ulcer fails to heal following operation. If, after normal convalescence and a period of freedom of symptoms, the same symptoms recur they are invariably again due to ulcer. The more closely these symptoms resemble the original complaints the more likely is the lesion to be found in the same area as it occupied before.

Reactivated duodenal ulcer.—Occasionally after gastro-enterostomy for duodenal ulcer, there are brief attacks of heartburn lasting from a few minutes to a few days. These may be associated with regurgitation of sour material and sometimes with mild pain in the old area. These exacerbations usually follow periods of worry, fatigue, or intense work and are probably caused by intervals of hyperacidity during which the old ulcer becomes reactivated for a short time. Several days rest (a brief vacation), a bland diet, and a few doses of alkali are usually sufficient to terminate such attacks. If foci of infection have not already been removed they should receive prompt attention. Sometimes, however, the symptoms persist in spite of medical treatment. It may then become necessary to institute radical surgical treatment, such as resection.

Recurring gastric ulcer.—Because of the dangerous possibility of malignant neoplasm occurring in gastric ulcer and especially in a recurring gastric ulcer operative treatment would usually seem to be preferable; it certainly is safer. Sometimes the lesion is too close to the cardia for resection or there are other serious contra-indications to operation. Then a carefully planned regimen, such as is used in the treatment of duodenal ulcer, is justifiable.

TREATMENT OF GASTROJEJUNAL ULCERS, GASTROJEJUNITIS, AND GASTROJEJUNOCOLIC FISTULA

Gastrojejunal ulcer.—If well-defined symptoms recur after gastro-enterostomy and if the fluoroscope reveals a deformity at the stoma, further surgical treatment usually becomes necessary before permanent relief can be obtained.

Gastrojejunitis.—There is, however, another group of cases with early recurring lesions at the stoma in which careful medical treatment can be applied with excellent results. The following report of a case illustrates this group:

A man, aged twenty-two, was admitted to the Mayo Clinic early in 1926 with symptoms characteristic of peptic ulcer which had lasted three or four years. The Roentgen ray revealed a deformity beyond the pylorus. Duodenal ulcer was diagnosed, and gastro-enterostomy was performed. For six or seven months he felt fine; then he noticed occasionally a sensation of fullness in the epigastrium following meals. One night, about nine months after the operation, he was awakened with moderate epigastric pain; the nausea was intense. He promptly vomited about two liters of food which he had eaten twelve hours previously. Next morning he noticed tarry stools, and for the following fortnight the stools continued to show some blood. At the time of the onset of these symptoms he had a sore throat and an infection of the middle ear. Shortly after this episode attacks of pain began to appear an hour or so after eating. This pain was felt about 10 or 12 cm. lower than the original pre-operative pain. Food and soda relieved it promptly. After these symptoms had persisted for several weeks the patient returned for observation. Repeated Roentgen-ray examinations of the stomach and duodenum failed to show anything of importance except the original deformity due to the duodenal ulcer. Gastric acidity was normal. Acute hemorrhagic gastrojejunitis was diagnosed for three reasons:

1. If there is no bleeding from a duodenal ulcer before operation, and hemorrhage is one of the recurring symptoms, the lesion is more likely to be gastrojejunal than duodenal.
2. Retention could not have occurred in this case unless there was some trouble at the gastroenterostomy opening.
3. The pain was in the characteristic gastrojejunal situation.
4. Repeated negative roentgenograms tended to exclude gastrojejunal ulcer.

Several infected teeth and an infected tonsil stub were removed, and a brief medical regimen was instituted. Thus far the patient has remained well. Material from the infected periapical area of these teeth, injected intravenously into animals, produced hemorrhagic duodenal lesions.

When recurring difficulties following an operation are brief or mild a medical regimen would seem to be reasonable even though there is roentgenologic evidence of an ulcer at the stoma.

Gastrojejunocolic fistula.—This condition is frequently not diagnosed before operation. However, when recurring ulcer is suspected after gastro-enterostomy and diarrhea occurs with lienteric stools and rapid loss of weight this complication should be suspected. If there is fecal vomiting or belching with fecal odor as well, the diagnosis of fistula between the stomach and colon or between the jejunum and colon can usually be made. Occasionally gastrocolic fistula occurs without any history suggesting gastrojejunal ulcer. In a large number of these cases there is no roentgenologic evidence of fistula. Prompt surgical measures are indicated when the symptoms point to this complication.

TREATMENT OF PENETRATING OR PERFORATING PEPTIC ULCER

Recently I studied a series of cases of recurring ulcer the diagnosis of which had been confirmed at operation.[12] In 62 per cent the ulcer gave pathologic evidence of chronic perforation. Cederbergh reported a series of cases in which 68 per cent showed evidence of chronic perforation.

Clinically it is frequently difficult to determine which ulcers are the perforating type. Severe pain may not be an invariable sign that an ulcer has these pathologic characteristics, but it is an important guide. If this is associated with bleeding, the lesion is almost certain to be of the perforating type. Pain referred along the sternum and into the chest or to the region lateral to the lower dorsal spine is frequently a sign that the ulcer is slowly penetrating the wall of the viscus. If by means of a clinical history the actual pathologic condition of benign gastric and duodenal lesions can be determined with a fair degree of accuracy the type of treatment can be chosen much more intelligently. This is important in the chronic perforating type of ulcer because in my experience such an ulcer does not heal well on a medical regimen, and such treatment should not be advised unless operation is contra-indicated. The results of treatment are apt to be discouraging even though the symptoms are not severe at the time of consultation and the history short.

Regarding perforating peptic ulcer Pannett has said: "There are but few common emergencies like that of the rupture of a gastric ulcer in which within a few hours a patient is dramatically plunged into the direst peril and yet can be rescued by timely surgical intervention if favorable conditions prevail."

It is wise to remember the possibility of perforating peptic ulcer in every case of acute abdominal crisis. In almost every case of acute perforation of a duodenal or gastric ulcer the ulcer is chronic; this means that a history of chronic dyspepsia can be obtained. It is extremely rare for perforation to be the first evidence of peptic ulcer, though this, it must be remembered, does happen. The chances for recovery following this complication depend largely on prompt diagnosis and the prompt institution of surgical measures. If operation is undertaken within twelve hours after the rupture, the patient has a good chance to survive, but if this complication has existed for more than twenty-four hours there is a mortality of at least 60 per cent.[6]

It is usually not difficult to make the diagnosis. There is a rapid onset of extremely severe, agonizing pain in the epigastrium; the distress is not necessarily limited to this area, but may extend into the lower right quadrant. The patient is frequently found in a condition of shock.

Attention must be called to the fact that occasionally, after persisting for an hour or so, the pain becomes less severe for some time, probably because some peripheral tissue plugs the hole in the viscus. Usually, however, the severe pain recurs after a period of a few hours. Frequently pain in the left supraclavicular region is complained of. The most characteristic observation in this emergency is board-like rigidity in the upper part of the abdomen with marked tenderness. Whatsoever surgical measure is decided on should be carried out promptly and quickly. It has been pointed out that little time should be spent looking for a second perforating ulcer if one is repaired; two ulcers rarely perforate at the same time.

TREATMENT OF HEMORRHAGIC PEPTIC ULCER

A moderate amount of hemorrhage is not an uncommon complication of peptic ulcer. Careful search through the histories of 150 cases of recurring ulcer[13] revealed the fact that in 48 per cent there was evidence of bleeding either as a complication of the original lesion or of a subsequently recurring lesion. Hemorrhage seems to occur a little more frequently from gastrojejunal ulcers than from gastric or duodenal ulcers. The bleeding from a gastrojejunal ulcer is usually not copious although persistent oozing may result in cases of severe anemia. Bleeding by mouth rarely occurs in cases of anastomotic ulcer, more frequently the stools are tarry. Hemorrhage from a peptic ulcer, even though severe, is not a symptom about which, as a rule, we need to become particularly alarmed because it is far less often fatal than is generally supposed. Operation undertaken immediately following or during a hemorrhage is hazardous. The panicky precipitation of a patient into an emergency operation because of acute gastroenteric bleeding is not good practice, and surgical measures should be undertaken only after all other approved measures fail to stop the hemorrhage.

Medical treatment of acute hemorrhage.—The necessity for complete rest and relaxation is obvious. The patient must be kept quiet, to lower the blood pressure and prevent clots from being dislodged. Morphine should be used in sufficient amounts to induce drowsiness. An ice-bag should be kept over the epigastrium, and hot applications to the extremities are useful.

Food by mouth should be withheld for a few days. Many believe that it is advisable to start giving small feedings of milk and alkalis at frequent intervals as soon as the acute bleeding has subsided, since this procedure reduces gastric acidity and hyperperistalsis and thus favors the healing of the ulcer. There probably are some advantages in this method, but it seems safer to withhold food until there is evidence by examination of the stool or other signs that the bleeding has stopped, or at least abated to slight oozing. After this a regimen such as is used in the first or second week of the milk-alkali treatment (as outlined in the early part of this paper) seems advisable. This course of treatment is then continued until the condition of the patient has improved enough to permit surgical intervention without unusual risk. The fluid intake in these cases can be maintained at its proper level by the administration of glucose and solutions of sodium chloride by rectum. If the prostration is severe, it may become advisable to give sodium chloride solution subcutaneously.

The stomach-tube may be of some value in controlling gastric hemorrhage in certain cases. Hurst has advised introducing a tube gently until it has passed a little distance beyond the cardia, then washing the stomach with a 1:1,000 solution of ferric chloride until it is clear of blood. Others have advised the use of 1 dram of 1:1,000 epinephrin introduced in the same way and left in the stomach; this has been used after the stomach has been washed out with the ferric chloride solution.

I seldom find it necessary to use these means, and I hesitate to advise the use of the stomach-tube except for hemorrhage following operation if it causes much distress to the patient, because the associated retching and vomiting will be likely to do more harm than good.

Balfour, in discussing hematemesis, said: "Transfusion not only restores the quantity of the blood, but increases the clotting element, yet it must be intelligently advised, as it may give a false sense of security and may even cause the reopening of a vessel wall which has been closed by a clot."

Transfusion is rarely necessary to save life in the presence of acute hemorrhage. If, however, there are repeated slight hemorrhages it may become necessary to transfuse and even to resort to emergency operation if the bleeding continues in spite of the various measures instituted to stop it. I have frequently observed that the oozing which sometimes continues after the acute bleeding has subsided is successfully controlled by a transfusion of 250 or 300 c.c. of blood. This seems especially efficacious if given by the direct method. There are some patients who get along poorly following hemorrhage. They do not regain their strength, appetite is lacking and it seems impossible to get the hemoglobin or erythrocytes to increase. Such patients are usually greatly benefited by a few transfusions.

Substances intended to increase the coagulability of the blood have been advised, and I have used them in some cases. Although they may have some value, the results thus far obtained have not been encouraging, but they have been used too seldom to justify definite conclusions.

PRE-OPERATIVE PREPARATION OF THE PATIENT IN CASES OF COMPLICATED PEPTIC ULCER

During the last few years the importance of proper preparation of the patient for operation on a complicated ulcer has been emphasized by many surgeons. It has been pointed out that the risk of the operation is lessened and that the result of the operation is much more encouraging than when the patient is not prepared. This is but one instance of how close co-operation between internist and surgeon is rewarded by an encouraging reduction of mortality in these complicated cases.

Preliminary treatment in the following cases seems to be particularly indicated: (1) when the ulcer causes obstruction or retention; (2) when there have been recent hemorrhages or marked secondary anemia is present; (3) when there has been a recent exacerbation, especially if a gastrojejunal ulcer is present, with recent severe pain suggesting perforative attacks and with evidence of inflammatory exudates, masses, and so forth; and (4) if the patient is in poor general condition due to weakness, emaciation, dehydration, and so forth.

In cases of obstructive ulcer.—In many cases of peptic ulcer there is evidence of slight retention or delay in the emptying of the stomach. In most of these little attention is required before operation can be undertaken without additional risk. It is advisable, however, to keep such patients on a liquid diet and wash the stomach twice daily for several days. There are other cases, however, in which emaciation, marked dehydration, and almost complete pyloric closure are present. Intensive pre-operative care is then necessary. Besides obstruction there may be another complication which demands even more prompt attention. Not infrequently toxemia with definite chemical changes in the blood accompanies marked retention. This condition has been intensively studied by Brown, Eusterman, Hartman, Rowntree, and others. The clinical features of this intoxication vary from slight drowsiness and nausea to extreme prostration with increased muscular irritability and sometimes tetany. It is important that the complication be recognized early because suitable treatment is followed by prompt improvement; yet neglect of it or failing to recognize its presence may quickly precipitate an extremely critical condition. It has been found that even mild cases can be recognized by chemical studies of the blood. The urea content of the blood is found to be increased, the plasma chlorides are decreased, and usually there is an increase in the ability of the plasma to combine with carbon dioxide. It is now my routine to examine the blood chemically in all cases in which gastric retention is manifested. In this way mild cases of toxemia are frequently discovered before symptoms become definite. Alkalosis can be recognized, however, even in its early stages without chemical investigation of the blood. When a patient who has previously manifested only the signs of mechanical difficulties at the outlet of the stomach, becomes flushed, asthenic, and drowsy, and increased retention, low blood pressure, and urinary changes are evident, the presence of alkalosis should be suspected and treatment instituted.

According to McVicar the clinical features of this toxemia are vomiting, dehydration, neuromuscular irritability, prostration, low blood pressure, and oliguria or anuria, while in fulminating cases the patient sinks into what may be termed a typhoid state. Death results quickly in the severe cases if no treatment is instituted.

In cases of retention with or without toxemia.—The pre-operative routine treatment in cases of marked obstruction, if the blood has been found to be chemically normal, is the following:

1. The diet consists mostly of soups, fruit juices, custard, jello, and substances of such consistency.
2. The contents of the stomach are carefully syphoned off once or twice daily until there is practically no food residue.
3. About 1,500 to 2,000 c.c. of 5 per cent glucose solution in sodium chloride solution is used daily by proctoclysis. This is absorbed without difficulty and is a great help in overcoming the dehydration, which is present in most of these cases. Sometimes the use of atropine may aid in reducing the retention.

I have found that 3 or 4 ounces of castor oil or mineral oil introduced into the stomach through the tube after lavage will aid in opening or relaxing the pylorus.

If obstruction is complicated by toxemia the usual routine as previously outlined is followed, but, in addition, a solution of glucose and sodium chloride is injected intravenously and also given by proctoclysis. A 10 per cent solution of glucose and 1 per cent solution of sodium chloride in freshly distilled water is used. It must be prepared with extreme care. From 2 to 3 liters of this can be given daily, slowly, from twenty to thirty minutes being required for each liter. A solution of the same concentration is used for proctoclysis. Several liters can usually be given daily without distress. These patients must be watched carefully because serious difficulties can quickly develop. Whenever possible the blood should be examined chemically every few days because this affords the surest indication of the condition.

The improvement following the use of sugar and sodium chloride intravenously, especially if it is given early, is usually surprisingly satisfactory. Within twenty-four hours the picture is frequently entirely changed, not only as far as the chemical state of the blood is concerned, but in the general improvement of the patient.

The surgical mortality was highest in the cases in which obstruction, or marked gastric retention from whatever cause, was present. Since the institution of proper pre-operative measures whereby toxemia, dehydration, and marked asthenia has been eliminated, the surgical mortality is no greater than in uncomplicated cases.

In cases of hemorrhagic ulcer.—Ordinarily a hemorrhagic ulcer is definitely active. Because of this and the associated risk attached to operations on anemic patients, it is usually advisable to spend some time in preparing for the operation. The procedures instituted immediately following the hemorrhage have been outlined previously. During the regimen instituted for the control of the hemorrhage, the period of the ulcer's acute activity is often passed. A surgeon usually makes every effort to excise any ulcer that has shown any tendency to bleed and I believe there is much more chance of accomplishing this if there is a period of several weeks of treatment between the time of the hemorrhage and the time of operation.

PRE-OPERATIVE CARE IN CASES OF GASTROJEJUNAL ULCER AND SUBACUTE PRIMARY OR SECONDARY ULCER

During the last year it has been the custom of some surgeons to advise special preparation of the patient preparatory to operation on ulcers, especially gastrojejunal ulcers which are in a stage (or just have passed through it) of acute exacerbation. The lesions are then in an acute or subacute inflammatory state. Many of these give evidence at operation of localized peritonitis or even inflammatory masses (some of which could be palpated before operation) surrounding the ulcer area. It seems entirely logical to assume that operation, in a field obviously infected and in tissues already the site of an inflammatory process, is a considerably more dangerous procedure than an operation on the same tissues after the acute condition has subsided. A carefully planned diet consisting mostly of bland food, together with enough alkali to keep the acidity of the stomach low, the patient being kept in bed, or at least at rest, seems to be all that is necessary to initiate the healing process. The operation can be carried out after a brief period with considerably less risk to the patient.

Some pre-operative preparatory care of patients who are in poor general condition and are thin, undernourished, and dehydrated seems advisable. A bland diet of high caloric value should be used. To the dehydrated patient with dry flaky skin, fluids should be given in large amounts. Two liters daily of glucose (10 per cent) sodium chloride (1 per cent) solution given by proctoclysis is usually absorbed without difficulty. These patients should be encouraged to take a moderate amount of exercise daily. Usually after a week or two of careful management their general condition is noticeably improved and any surgical procedure may be carried out with decidedly less risk.

It is to the great advantage of the patient, as well as to medical science, that close co-operation be practiced by the physician and the surgeon in the management of the group of complicated cases in this field. Such co-operation is probably best carried out in an institution but it can and should be applied whenever it seems reasonable to assume that the combined effort of two or more men can better serve to alleviate suffering or save life.

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LESIONS OF STOMACH AND DUODENUM*

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The common organic diseases of the stomach and duodenum are benign ulcers of both and cancer in the former. Syphilis, tuberculosis, and benign tumors are rare. Primary carcinoma is rarely, if ever, found in the duodenum. The relative incidence of the common structural diseases is of interest and importance to a general survey of the organic dyspepsias. Duodenal ulcer is encountered about ten times as frequently as gastric ulcer.[1] We also find that gastric carcinoma is almost twice as common as benign gastric ulcer, and that, if carcinoma of the esophagus and cardia are added to those of the stomach, the incidence of malignant disease affecting the stomach is three times as great as benign ulcer. The point is stressed that benign gastric ulcer is relatively rare, because, until recently, it was not unusual in text-books and in undergraduate class-rooms to have all benign ulcers classified as "gastric," and the practice of making an anatomic distinction is not yet universal. The significance of making a distinction may be illustrated. Let us suppose that Drs. A. and B., in the course of several years of practice, each encounter 125 cases of dyspepsia due to structural disease of the stomach and duodenum. Dr. A. is accustomed because of his training to refer to all benign peptic ulcers as "gastric." He will, therefore, have in his records 110 "gastric" ulcers and 15 cases of carcinoma of the stomach. Dr. B., on the other hand, makes an anatomic differentiation, and his records show 100 duodenal ulcers, 10 gastric ulcers and 15 cases of carcinoma. It is conceivable that Dr. A. may minimize the chance of a "gastric" lesion being malignant, whereas Dr. B. will be uneasy when a roentgenologic examination reveals a true intragastric lesion. Dr. A's habit of thinking leads him to believe that gastric ulcer is a common lesion. Dr. B's more precise observations teach him that ulcer of the stomach is relatively uncommon.

Before the advent of the trained roentgenologist the anatomic localization of a benign ulcer was impossible. We have all read that a gastric ulcer differs from a duodenal ulcer. The surgeon must attack a gastric ulcer directly and excise it or destroy it, while, in dealing with a duodenal ulcer, an indirect operation, such as gastro-enterostomy, will usually suffice. The immediate risk of operations for gastric ulcer is greater than for duodenal ulcer, and the ultimate surgical results are a little less satisfactory. But gastric and duodenal ulcers are alike in one particular, namely, the clinical syndrome. In either case epigastric discomfort comes on at an appreciable interval after food and persists, as a rule, until relieved by the ingestion of more food or by the adminstration of alkalis. The dyspepsia of each is characteristically periodic, intervals of comfort lasting weeks or months alternating with periods of discomfort. If we admit that the clinical picture in gastric ulcer is a little more likely to be indistinct or blurred we are still without data of differential diagnostic value. The exact location of a lesion is possible only by the roentgenologist. Formerly, that is before the era of roentgenologic diagnosis, physical signs were of greater relative significance in diagnosis. Local tenderness, vomiting, hematemesis, melena and severe radiating pain were emphasized as points of diagnostic value, but these are evidences of complication, such as penetration, obstruction, or bleeding. With the aid of the Roentgen ray it is now possible to make a precise anatomic diagnosis of peptic ulcer in an increasing number of cases before the onset of complications, and it should be the aim to make a diagnosis and institute treatment before severe complications ensue. Usually the onset of complications, especially obstruction, brings about a change in the daily sequence of dyspepsia. Food may aggravate, alkalis give incomplete relief, and periodicity disappear, and it is only when the antecedent history of typical ulcer dyspepsia is elicited that a suspicion of the true underlying cause is aroused.

With improvement in diagnostic methods the gastro-enterologist is no longer content to treat only the complicated duodenal ulcer, but is aware that an uncomplicated or simple duodenal ulcer may produce a greater or less degree of disability. The victim of duodenal ulcer is entitled to treatment more often because of impaired economic efficiency than because of a threat to his life. He is comparable to a laborer who has an inguinal hernia. The principles underlying treatment are sufficiently well defined to insure satisfactory results, not only in the majority, but in nearly all cases. These principles are the same in medical as in surgical treatment. It is possible to divide the problem of treatment arbitrarily into two phases.

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*Presented before the North Dakota State Medical Association, Grand Forks, June 2, 1927.

Some factor or series of influences causes local necrosis of tissues. We are not all convinced that these influences have been identified. The experiments and researches of Rosenow and others have shown that infection plays a rôle in the life history of a peptic ulcer. Organisms are constantly found deep in the tissues. Infective material from foci in patients suffering from peptic ulcer produces ulcers in the duodenum and stomach of laboratory animals when injected into such animals. One cannot feel, in the face of such information, that any treatment for ulcer is complete if focal infection is allowed to persist. Faulty habits of work, worry, nervous temperament, dietary indiscretions, and the stress and strain of modern life have been put in causative relation to ulcer. It is likely that these factors lower resistance and so predispose to ulcer. It is certain that complete symptomatic relief under any form of treatment is sometimes prevented by such influences, but it is equally true that a chronic ulcer seldom, if ever, responds to eradication of foci and adjustment of hygiene. Spontaneous cure is sometimes attained, but usually in spite of the persistence of the factors just outlined and not because any adjustment has been made.

The second phase in the treatment of duodenal ulcer has to do with mitigation of the influence of the powerful chemical agents which hinder healing: the hydrochloric acid and pepsin of the gastric juice. One may speak with some assurance regarding this factor since experience has shown that gastro-enterostomy, which facilitates emptying and lowers gastric acidity, has in a consistently large percentage of cases brought about symptomatic cure and the economic rehabilitation of victims of duodenal ulcer. It has, moreover, brought about satisfactory cure in the face of persistent foci and continued faulty hygiene. One must, therefore, assign first importance to agencies, whether medical or surgical, which lessen the corrosive action of gastric juice. This by no means precludes the use of ancillary means of treatment, but it is expedient that the relative value of therapeutic procedures be kept in mind and, moreover, that the objective in treatment, the prompt and permanent restoration of the patient to all the necessary activities of his occupation, never be lost sight of.

A malignant lesion of the stomach seldom simulates duodenal ulcer roentgenologically; consequently, a duodenal ulcer may be treated medically without the fear of treating an incipient carcinoma. No such confidence attends the treatment of a lesion located by Roentgen ray on the gastric side of the pylorus. Operation for duodenal ulcer may, except in the event of the rare accident of acute perforation, be undertaken after careful deliberation. It need not be an emergency procedure. The immediate and ultimate success of the operation may be safeguarded by a careful choice of the time, place, and surgical personnel. The indication for operation is a persistence of disability in the face of reasonable efforts to control it by medical means. There can be no excuse for an operation for a symptomless duodenal ulcer. Neither is it justifiable to withhold the benefits of skillful surgery from the patient whose earning capacity and comfort are persistently impaired either from failure of medical management or from the restrictions which such management may impose.

In the management of gastric ulcer precise diagnosis is of first importance. The first step is the anatomic localization of the lesion by the roentgenologist. Next, the possibility that the lesion portrayed by the fluoroscope is malignant must be considered. How can this be decided? In the present state of diagnostic acuity it is a most difficult task. If there is a long history of dyspepsia of the peptic ulcer type and if there has been no recent change in the character of the distress, if the lesion portrayed is small, and if there is a high percentage of free acid in the aspirated gastric contents, it may be assumed that the lesion is benign, but it can be determined only by examination of the excised specimen. Undoubtedly, the majority of such lesions will prove to be benign, but in a series recently studied 10 per cent of cases of operable carcinoma of the stomach gave roentgenologic signs indistinguishable from those of benign ulcer. When the roentgenologist is in doubt the clinician will seldom be in possession of data of superior diagnostic worth. He cannot afford to "wait and see" and it will be safer to advise exploration than to run the risk of allowing an operable cancer to grow to a stage of inoperability. It has sometimes been suggested that when one is in doubt an intensive medical regimen may be instituted, and if the symptoms respond to treatment a benign lesion may be diagnosed. However, in many cases of early carcinoma of the stomach the dyspepsia is of the ulcer type: the symptoms manifest periodicity and the daily sequence, during "spells," of food ease and pain. Such cases may respond to medical management and engender a false sense of security in the mind of the inexperienced physician. The physician who is accustomed to ascribing all peptic ulcer dyspepsia to "gastric" ulcer will be more likely to be mistaken since his actual error will be diluted by the preponderance of duodenal ulcer encountered in the average experience.

Surgery offers the only hope to the patient with gastric carcinoma, and the results of surgery are in direct proportion to early recognition. At the Mayo Clinic, in the years 1920 to 1924, inclusive, in approximately 25 per cent of the cases in which carcinoma of the stomach was diagnosed, the lesion proved to be resectable. In an additional 25 per cent an exploration was undertaken, but the malignant tumor was found to be inoperable, because of the extent of the lesion, because of its direct extension to adjacent vital structures or because of internal metastasis. In half of all cases operation could not be advised because of external metastasis, which precluded removal of all malignant tissue or more often because the roentgenologic examination showed the lesion to be inaccessible or too extensive to permit resection. With improvement in roentgenologic technic and experience, the diagnosis of inoperable and hopeless cancer of the stomach has become relatively easy, but the chief concern in the future must be the diagnosis of resectable cancer. One hindrance to early diagnosis may be the text-book description or in some instances the undergraduate class-room conception of gastric cancer. This idea presupposes a tumor, anacidity, anemia, loss of weight, gastric retention, persistent discomfort, and a patient who has passed middle age. In the series[2] of 524 cases of resectable carcinoma at the Mayo Clinic there was free acidity in 53.4 per cent, an absence of palpable tumor in 49.4 per cent, retention in only 46 per cent, and gross anemia in only 17 per cent. Ten and nine-tenths per cent of the patients were less than forty. The roentgenologist reported an intragastric lesion in 98.2 per cent. He was, however, able to say with certainty that the lesion was malignant in only 67 per cent, and, as I have already stated, in 10 per cent the lesion had the roentgenologic appearance of benign ulcer.

It is sometimes stated that early diagnosis is precluded by an abrupt onset and fulminating course, but in this series the average duration of symptoms was eleven months. The early symptoms were pain, vomiting, hematemesis, loss of weight and strength, and, in a few instances, the discovery of an epigastric tumor. There was, as a rule, no lack of symptoms, but a lack of appreciation of the possible significance of the symptoms. A malignant lesion situated in the distal third of the stomach and on the lesser curvature will produce symptoms earlier than one in the body or greater curvature, but in more than two-thirds of all cases carcinoma is found in the distal third of the stomach.

This study shows that carcinoma of the stomach is met with about four times as frequently in men as in women, and, although it is found at all ages, the greater number are grouped at the beginning of the sixth decade of life. The breadwinner is here attacked at a time when he must ignore minor upsets in bodily comfort if he is to maintain his position in a competitive struggle for existence. Sometimes a knowledge of antecedent dyspepsia, due to untreated disease of the gall-bladder or appendix, or even migraine or other functional dyspepsia, may confuse the patient or his physician and cause a postponement of the comprehensive examination necessary to early recognition of an intragastric lesion. Perhaps at the age of predilection there is a dread of cancer and the patient delays his visit to his physician; the physician may not have the facilities for a complete study or with facilities may misinterpret his findings.

Undoubtedly, the commonest misinterpretation is to assume that a discovered intragastric lesion is benign. The profession as a whole is justly conservative. Tradition and experience yield slowly to laboratory methods, but if cancer of the stomach is to be recognized during the operable stage it must be suspected in patients whose appearance is in striking contrast to the time-worn picture of emaciation and secondary anemia. In early diagnosis the trained roentgenologist dominates the field. His interpretation of an intragastric lesion may have to be supplemented or amended by other clinical data and, when he is in doubt, it will be safer to urge prompt surgical intervention. The technical achievements of surgery for cancer of the stomach are satisfactory, but the patient presents himself first of all not to the roentgenologist or the surgeon but to his physician. It will fall to the latter to improve the management of this most serious of all organic causes of dyspepsia.

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PROCEEDINGS OF THE MINNESOTA ACADEMY OF MEDICINE

Meeting of October 12, 1927

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town and Country Club, on Wednesday evening, October 12, 1927. Dinner was served at 7 P. M., and the meeting was called to order by the President, Dr. J. E. Hynes, at 8 P. M. There were twenty-seven members and five visitors present.

In the absence of the Secretary, Dr. McCloud read the minutes of the September meeting, which were approved as read.

The President called on Dr. I. A. Abt, of Chicago, to give a talk, and Dr. Abt responded in a most cordial manner.

The paper of the evening was the President's Address, the reading of which had been postponed from the September meeting. This was read by the retiring President, Dr. Frank E. Burch, and was entitled "The Early Development of Cataract Survey" and illustrated with numerous lantern slides. Dr. Burch also showed the members of the Academy some rare old and interesting volumes on the subject.

DISCUSSION

Dr. John Brown (St. Paul): I have enjoyed very much hearing Dr. Burch on this subject. The thing that struck me, and was not emphasized particularly, is that these surgeons of that time must have gone into the eye with considerable temerity, and there must have been many eyes sacrificed.

I would like to ask Dr. Burch if there is anything given in these papers that suggests the vast number of eyes lost by infection and if they did anything to combat it at that time. I think it must have taken a great deal of fortitude then to go after these cataracts as they did.

Dr. H. W. Grant (St. Paul): I think this subject and address have been extremely interesting. In my time I have seen nothing but the classical operation with the von Graefe incision and I believe at the present time we have reached the limit of improvement in technic. If infection could be removed the results would be still better. Practically all eyes lost at the present time are lost through infection.

Dr. Burch (closing): I have nothing to add except to answer Dr. Brown's inquiry as to whether any mention was made of the means of combating infection and preventing destruction of the eye before the day of asepsis. They were numerous, and in every text-book I was impressed with the importance or stress laid upon the season of the year, the phase of the moon, the degree of humidity, and the reliance placed in prayer, etc. There were no antiseptics used, although mention is made of many collyria, brandy and water dressings, etc., some of which had antiseptic virtue.

Dr. F. L. Adair (Minneapolis) reported a case of "Tubal Pregnancy Accompanied by Ovarian Cyst on the Same Side."*

M. R., a multipara, 37 years old, was admitted to the Gynecological Service of this hospital, September 14, 1927, complaining of vaginal bleeding, which began two weeks before and has persisted daily up to the present time.

The patient was well developed and well nourished and showed no evidence of acute illness when admitted to the hospital. Her past history included seven normal pregnancies to term, no miscarriages or abortions, and no sickness other than the usual diseases of childhood. The menstrual life of the patient has been entirely normal since the establishment of her menses at the age of 13. From August 2d to the 7th there was a normal period which was followed by the present vaginal bleeding, which began September 1st and has continued in small amounts daily until examination September 14th.

Upon questioning, the patient expressed the belief that she was not pregnant since she had not experienced any of the symptoms noted in her other pregnancies. At times during the last three days she had had a few colicky pains in her lower abdomen, but they were never very definitely localized, nor had they caused any marked discomfort or alarm.

A regular menstrual period was expected in the first week of September, but when the patient continued to flow for two weeks (longer than she ever had before) she feared that something was wrong and came into the hospital for examination and treatment.

Physical examination showed the woman to be well developed and slightly anemic but otherwise quite normal to inspection. The lungs and heart were normal though the blood pressure was elevated to a systolic pressure of 140 and a diastolic of 102. Moderate tenderness on deep palpation was noted in the left lower quadrant but no muscle spasm or rigidity was present.

A few small lesions resembling condylomata were seen on the labia, but these were non-specific and the Wassermann reaction was negative. A bloody discharge of bright-red color and containing shreds oozed steadily from the cervix. The cervix was of the large, bulbous type lacerated deeply on both sides and was slightly softer than normal. The corpus, however, was normal in size, position, and consistency. Its mobility was noticeably restricted. In the left adnexal region a soft boggy mass, about one and one-half times the size of the corpus, could be outlined extending posteriorly into the cul-de-sac of Douglas. Examination of the left adnexa caused the patient considerable pain. The right appendages seemed entirely normal.

At this time a diagnosis of probable left tubal pregnancy, unruptured, was made with the possibility of a left salpingo-oöphoritis also considered.

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*From the Gynecological Service, Minneapolis General Hospital, Minneapolis, Minn. F. L. Adair, M.D., and R. E. McDonald, M.D.

Following the initial examination the patient was put to bed and treated expectantly with hot douches and fluid extract of ergot in one drachm doses every four hours. After four days in the hospital all bleeding stopped, and a re-examination was made with the patient feeling much improved and having no pain. At this time the mass, which had been previously quite tender, no longer caused pain during examination. The tumor was now felt to be definitely fluctuant, about 6 to 7 cm. in diameter, but not adherent to the corpus, and the diagnosis was changed. A left ovarian cyst seemed most probable, and surgical treatment was advised.

An operation was performed on September 21, after the patient's temperature had been normal for seven days. At this time the hemoglobin was 68 per cent by the Sahli method; erythrocyte count, 3,900,000, and the leucocyte count 17,200 of which 78 per cent were p.m.n., 17 per cent lymphocytes, 2 per cent basophils and 1 per cent mononuclears.

A midline suprapubic incision was used. As the peritoneum was exposed a slate-blue discoloration was noted and was explained by a large amount of dark-red blood and clots which lay free in the lower peritoneal cavity. In exploring the pelvis the right adnexa were found normal, but two distinct and closely associated masses were found in the left iliac fossa. One of these was a cystic ovary and the other the left tube which was markedly enlarged in its isthmic, ampullar, and fimbriated portions. The tube was amputated just proximal to the enlarged distal half, and the ovary removed at a small pedicle arising from the utero-ovarian ligament. After removal the tube was examined and found to be unruptured. Bleeding had occurred through the fimbriated end.

The two masses which were about equal in size and shape lay close together and are compared in the accompanying illustration. From this comparison and the fact that the tumor masses lay in such close apposition, it may be seen that the case presented some difficulties in making an accurate diagnosis.

Recovery was prompt and uneventful.

The pathologist submitted the following gross and microscopic reports: "The ovary has undergone extensive cystic degeneration and the normal tissue of the tube is largely replaced by soft hemorrhagic tissue resembling placenta. Microscopic examination of the tube shows chorionic villi and decidua."

Dr. E. M. Hammes (St. Paul) reported the following case:

A man, aged 68, was seen in consultation with Dr. L. E. Penny, on October 6, 1927. His family and personal histories were negative.

On September 16, 1927, the patient suddenly became quite weak, so that he had to remain in bed. He was seen by Dr. Penny, who found nothing abnormal except a tachycardia; rate, 120 to 140. The general weakness continued, and Dr. Hall was called in consultation. All findings were negative at this time except the persistent tachycardia and a marked general weakness. His heart-sounds were normal. There was no change noted in his condition until October 5. On that date the patient walked from his bed to the bathroom, and when he attempted to get up he found that he was unable to walk. He finally got back to bed with the help of his wife. Doctor Penny was called. The patient was very restless, tossing in bed. He complained of severe pain in his left leg. Both extremities were paralyzed. He was given a hypodermic of strychnia in the right leg, and its function gradually returned. The left leg remained paralyzed, was cold, and cyanotic.

When I saw him that evening he seemed somewhat flighty, had definite hallucinations of sight, seeing small bugs crawling up and down the wall, but knew that this could not be true because his wife was an excellent housekeeper. He knew he was in his own home, but thought that the whole building had been moved to Stillwater.

The neurological examination was negative except for the findings in the lower extremities. The right leg was normal except for an increased knee jerk and a positive Babinski; pulsation in the right leg could be felt in the femoral and dorsalis pedis arteries. The left leg was completely paralyzed. There was no pulsation in any artery including the femoral; the leg was cold, the toes were dry and gangrenous, a line of demarcation being noted below the knee; the knee and Achilles jerks were absent; there was no Babinski, and no plantar reflex. There was complete loss of all forms of sensation from the knee down. His pulse was 126; temperature, normal; blood pressure, systolic 140, diastolic 75. The blood Wassermann was negative.

The patient gradually became more delirious, and Dr. Colvin was called in consultation with the idea of amputating the leg. Dr. Colvin advised against this. The patient died October 11, 1927.

This patient evidently developed a transient thrombosis or embolus of the abdominal aorta, sufficiently high up to interfere with the circulation of the spinal cord, producing an ischemia with a subsequent paralysis. The thrombus finally lodged in the left common iliac artery, with the resultant gangrene of the left leg. This would explain the early transient involvement of the right leg with increased knee jerk and Babinski, and the terminal changes in the left leg.

No postmortem was obtained.

DISCUSSION

Dr. Gilfillan: Was there pain when he first had the paralysis?

Dr. Hammes: He had excruciating pain below the left knee. At no time did he have any rise of temperature. There was no evidence of endocarditis, according to Dr. Hall and Dr. Penny.

Dr. Gilfillan: A reasonable explanation of the case would be a development of an auricular flutter with formation of a thrombus in the left auricle and from this an embolus, lodging at the bifurcation of the aorta, later moving into the left common iliac artery. However, this will not explain the positive Babinski and increased knee jerk in the right leg.

Carl B. Drake, M.D.
Secretary.

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PAST HOLIDAY FESTIVITIES

The editor is almost willing to commit himself to some violent remarks on what has been going on the past three weeks or more, but he hesitates because he knows that so many people feel that the Christmas holidays and New Year's greetings are the most essential things in life. But frankly he doesn't believe it. The real fact of the matter is that we are getting into a very uncertain age of what is just and right, and the important thing is that we have all been overburdened by the expensive traditions that have been handed down to us from year to year. Yet it makes good business for the merchants so why should the writer complain or find fault in any way.

It does take a lot of time, a lot of patience, and a lot of endurance to go through these so-called festive days, and the editor has almost decided that next year he will leave the country on the first day of December and not return until a month later at least, and give orders that no cards shall be sent during his absence that he has not filled out and signed. Of course he knows perfectly well that this is a futile promise, but the desks and office tables are so littered up with cards and gifts and other paraphernalia that it becomes discouraging. It does not give one a chance to do his legitimate work. But if he can be assured that some of this overindulgence may be stifled, it will do him a world of good.

WHEN YOU ARE IN THE PROBATE COURT

The average proceedings in a probate courtroom, particularly in the large cities, are not of serious consequence, but there has been a note of warning started by the Supreme Court of Florida's decision affirming a judgment for the defendants, two physicians, saying that "the plaintiffs were Mrs. Fisher and her husband, each of whom claimed $25,000 damages. The declaration alleged that the defendants, together with one Gonzalez, were appointed by the county judge a committee to examine into the alleged insanity of Mrs. Fisher; that the committee reported that it had found her insane; that the report of the committee 'was false, wanton, and malicious in each and every particular, and as a whole;' that on the report the county judge adjudged her to be insane and that she should forthwith be delivered to the superintendent of the Florida State Hospital for care, maintenance, and treatment; that she was removed, in obedience to and by virtue of the adjudication of insanity, from her home and imprisoned in the common jail of the county, after which she was removed to the Florida State Hospital, and there restrained of her liberty, etc."

This shows an apparent reason why a good many physicians in the larger cities decline to serve in the probate court proceedings for the examination of a patient who is declared to be or suspected of being insane. There was evidently a good deal of antagonism and a good many things that a lawyer would understand that the average doctor would not. At all events, the plaintiffs, Mr. and Mrs. Fisher, demurred, and there were counter-replies, and finally the case was taken to the Supreme Court and the physicians who participated in the examination were exonerated. Yet these things may happen at any time, and it behooves one to be rather cautious; not too cautious, however, because there are a great many people who are brought up before the probate court who, by pull and politics and through special friendships, are finally freed from the plea of insanity and go out as they came in, insane. Again, there is too much attempt to exonerate the so-called mental case rather than to protect it. Very often it happens that these people are wilful enough to sue the attending physicians and demand some sort of satisfaction. Consequently, the doctor must exercise reasonable care and judgment in a declaration that the patient before him is insane. Fortunately, most of the insane are quite evidently insane, but there are borderline cases which, to the experienced man, are just as dangerous as those who are actively insane. As has been said before, too little has been said about mental depression, the patients brought to the probate court may be looked upon with too much sympathy and their mental depression overlooked. This is as grave an error as it would be to form counter charges and bring matters before the supreme court for a final decision.

These happenings create a very unhappy state of affairs, and in smaller places where the physician is reluctantly brought in to examine a patient for his or her sanity he is assuming a very responsible position. The probabilities are that the defendants in the case cited, the two physicians who examined the case, were perfectly right, and frank and honest in their statements. But all people do not look upon court proceedings, and particularly probate court proceedings, with the same degree of confidence they consider other matters, but one must remember that the restraint of liberty in persons suspected of being insane is just as important as if due to some other cause, although it should not be looked upon as a criminal procedure in any way. It is a question of medical evidence, behaviorism, conduct, and a long history of the individual who is to be submitted to the examining physicians. As has been said before, ordinarily it is a comparatively easy matter to declare the individual either sane or insane. In many cases the family are brought in, and they are not infrequently divided in their opinions. They will maintain that this man or woman has always been insane. On the other hand, a certain portion of them will maintain that the individual is sane and responsible. People talk about these things, speculate about them, the neighbors and friends take sides, and one would almost think at times that a friendly neighbor was an expert in insanity, when, as a matter of fact, they are simply expert in gossip and malicious meddling. At all events, the right will prevail even if the interfering neighbors insist on something to the contrary. Of course, the public has an idea that almost everyone brought to a probate court is perfectly sane, and they rebel at the restriction of liberty even if it is for the benefit of the individual.

THE BISHOP'S CONFESSION

Bishop Charles Fiske, of Central New York, has written a very pertinent paper which applies with great force to the medical profession as well as to the theological. It is very difficult to make an abstract of this paper, which appeared in the December number of *Scribner's Magazine*. It seems that in the early days of the Bishop's work he was a man who could be relied upon to join any committee that was suggested to him, particularly a welfare committee, an uplift committee, or a reform committee. And he found that most of his time was taken up by attending the meetings of these various organizations. One who has been a committeeman very often would know at once that he was obliged to sit and listen to a good deal of needless discussion by uninformed people; consequently it was not for some time that the Bishop was converted from all of this committee work and brought back to his own work, that of a puzzled and penitent parson.

The Bishop feels, too, that there is an alarming number of movements on foot in which he had participated, or had been asked to join, and now he draws his conclusions from his past activities. He comes to a very epigrammatical phase in life when he quotes the voice of an inmate of a state hospital for the insane, who declared that he knew exactly what was wrong with the world and knew also how to remedy it. "The thing that is wrong with the world," he said, "is there is entirely too much talking," which can be justified and proved by attendance at a large number of committee meetings. The Bishop found, too, that most of these committees were organized by young men and young women who were looking for a job to which there was attached a salary of sufficient dimensions to tide them over and also to provide them with quarters better than those to which they were accustomed. He found, too, that the average American business man has been encouraged to believe himself religious if he sings long and loud about the duty of service and insists that, unlike virtue, which is its own reward, Service (with a capital S) brings monetary returns of a real material worth; and he is forced to conclude that America has become almost hopelessly enamored of a religion that is little more than a sanctified commercialism, and he finds it difficult in this land to differentiate between religious aspiration and business prosperity. He further states that our conception of God is that He is sort of a Magnified Rotarian, and one wonders whether the social movement and the up-lift in general has not become, among Protestants, a substitute for devotion—worse than that, a substitute for real religion.

Then the Bishop discourses on charity, in which the medical profession is particularly interested, when, he says, charity is not only professionalized, but is commercialized so that often ministers, as well as doctors, who weary of the humdrum round of parish work and the professional calls, make up a considerable body of the employed, and it would take an expert statistician to estimate how many of them have been trailed through Russia and Europe to the Near East. "Young women who are uncertain of other employment seem to find a ready outlet for their enthusiasms and a comfortable living in the cause of social betterment." Not so with the doctors. They expend their charitable work among the deserving poor or those who pose, sometimes, as poor, and in the end neglect or refuse to pay their doctors' fees. It would be interesting to know how many doctors are drawn into this up-lift, reform, or protective work, as it is sometimes called, who never receive compensation but beget a good deal of damnation; and the man who demands a return or compensation for the work he has performed among people who are able to stand the pressure, finds himself in better standing with the masses of the sick than the man who makes a call for fifty cents or makes a call for nothing. However, this matter will be found very difficult to change. The doctors are liberal with their time and talents, and they do not always stop to consider the necessity of investigation before proceeding in their chosen line of endeavor; nor do they consider, among the professional class, how much injury may be done to their own state of health in laboring for the up-lift or reform and care of the so-called unemployed or unprotected mass of people.

Here is a choice abstract from the Bishop's article: "The discovery that there are over 150 central agencies having offices in Washington and representing all sorts of interests, fads, and fancies has reacted upon my evangelical fervor and mixed me in mind. I am like a young man who, when he heard that his best girl was a somnambulist, declared he was sick of denominational disputes, and though he was brought up a Baptist, would willingly go to her church." This is not a farfetched example of what doctors have to endure from numerous patients who fear that they are sick, think they are sick, and who need charitable attention. Another quotation applies equally well to the profession: "An expert spiritual diagnostician would probably declare that my grave state of health is due to the fact that I have been too frequently exposed to the contagion of executive secretaries. They range over a multitude of activities, civic, humanitarian, ecclesiastical, and political" (and one might add to this, medical). "They multiply until they become like the sands which are upon the seashore, innumerable. If someone had kept a catalogue of all the reforms which have been urged upon my consideration in the past fifteen years the list would be so formidable that the sympathies of the most violent of uplifters might for a moment be aroused on the behalf of the victim of their combined assaults."

The writer is tempted to quote another paragraph: "Ah, how many June bugs of reform I have allowed myself to chase! It is painful to tell about them, because the enumeration carries us back into so distant a past that it will reveal to friends the age of their penitent parson, and, of course, I don't want them to think of me merely as a nice old gentleman who for many decades has been too gently kind to discourage the progress of the professional uplifter. Yet, if some of us could only hit the sawdust trail, what a confession would pour from our lips as we told of the flittings into pastures new to which we have been led by the Chief Butterflies. Back we go to the days when we were sure that votes for women would reform politics; still further back, to the beginnings of the prohibition movement, which has since grown into an octopus with so firm a hold that it makes the reform of politics more difficult than in the era of the saloon. How vivid are the days when we engaged in a campaign for eugenic marriage, only to find some popular young clergyman taking us seriously, and in endeavoring to follow our advice with his society congregation, passing many a sleepless night before all was forgiven and forgotten. How long ago it seems, and how mild was the sensation it created, looking back now, when we lived in the days of 'birth control!' "

Doctors are being gradually led into the more intricate of these various reform movements, and with what success? They, too, not infrequently wake up to the unimportance of their vocation. They find themselves associated with uplifters from all sorts of organizations, and the result is they get entangled mentally, sometimes forgetting the medical side of their life and remembering only the so-called social side of medicine. The Bishop wonders, too, "How could one small brain contain all the expert knowledge necessary to settle the affairs of the universe?" Conceivably, might not others know far more than we of the complicated problems at issue in such matters as the minimum wage, the child-labor question, and women in industry? Was not the defeat of the child-labor movement a warning against overmuch meddling? "Could we not trust the Department of State in some delicate matter in which we have been blatantly free with advice? And could we not each stick to one thing and let other people do the things they choose, without imagining that the monetary object of our own enthusiasm was the only cause that must then obtrude upon the public eye? Is not overlegislation a curse? Are not some of the reform and welfare problems half-baked theories? Would it not be well to cultivate a sense of humor or, at least, a sense of proportion?" The doctor sees as much of this side of life as does the clergyman, and he knows, after a few years of experience, what sort of a thing he is brought in contact with—a neurotic individual, a spoiled child, or overzealous parents. If he is an honest man he will tell the truth, but does that get him anywhere? Does he succeed in his reform work from a medical angle? Not at all. He is promptly dismissed, and they get another physician who is either more easily brought over to the complaining individual's idea or feels that he must get along as best he can with the individual and the family. How often do medical men who are inveigled into charity welfare work fail to stand up for themselves, their principles, or their purposes. As a rule intelligent people accept a frank explanation of facts and failures, and they sometimes will accept the advice of a doctor, although it is seemingly against their wishes. At all events, the medical profession, if they could speak their mind, would reveal just as much difficulty in their confessions as the "penitent and puzzled parson."

NEWS ITEMS

Dr. C. E. Riggs, of St. Paul, has gone to Florida to spend the winter.

Dr. M. W. Pangburn has moved from Rapid City, S. D., to Scotland, S. D.

Dr. W. B. Benjamin, a recent graduate of Marquette, has decided to locate at Jasper, Minn.

Dr. W. M. Lancaster, of Wahpeton, N. D., is taking a postgraduate course at Tulane University, New Orleans, La.

Dr. H. J. O'Donnell, formerly of Canova, S. D., is now located at Onawa, Iowa, and is associated with Dr. J. S. Deering.

Duluth is rejoicing over the lowest death rate (8.9 per 1,000 population) shown by cities over 100,000 population in the country.

St. Mary's Hospital, of Minneapolis, announces that a nurses' home, to accommodate 200 nurses, will be built in the spring.

Dr. J. O. Lee has moved from Vermilion, S. D., to Canton, S. D. Dr. Lee has practiced medicine in South Dakota for nearly thirty years.

Dr. Victor S. Funk of the Staff of the Glen Lake Sanatorium, Oak Terrace, Minn., and Miss Myrtle Mangen, of Maple Plain, were married last week.

A group of women, in St. Paul, undertook in December to raise $20,000 for the equipment of the new children's hospital. They raised $31,000 in a short canvass.

Dr. W. T. Pearson, of Russell, Minn., has given up practice at that place and will move to Siren, Wis. Dr. Melville Sanderson, of Minneapolis, will succeed Dr. Pearson.

The Child's Guidance Clinic, of Minneapolis, the only clinic supported by the public schools anywhere, is attracting the attention of medical and educational men in this country and abroad.

Drs. W. C. Kaufman and F. W. Behmler, of Appleton, Minn., have formed a partnership. Dr. W. C. Heiam, who has been associated with Dr. Kaufman for some time, will seek a location elsewhere.

Dr. Frederick Schlutz, head of the Department of Pediatrics, University of Minnesota, expects a visit from child health specialists from South America this month to look over the work done in this line at the University.

Dr. M. B. Benjamine, of Rochester, Minn., is taking care of the practice of Dr. A. S. Rider, of Flandreau, S. D. Dr. Rider went to Europe with the Legion, and after the convention, remained, and is in Vienna for postgraduate work.

Dr. James B. Dickey, of Iroquois, S. D., died on December 31, at the age of 71. Dr. Dickey was graduated from the Homeopathic College of Missouri, in the class of '83, and soon located in Iroquois, where he had practiced over forty years at the time of his death.

At the annual meeting of the Black Hills District Medical Society, South Dakota, the following officers were elected: President, Dr. W. E. Morse, Rapid City; vice-president, Dr. J. A. Barker, Hot Springs; secretary-treasurer, Dr. J. L. Stewart, Nemo; delegate, Dr. T. P. Geyerman, Hot Springs.

Miner County District Medical Society, of South Dakota, held their annual meeting at Howard, S. D., and the following officers were elected: President, Frank M. Loring, M.D., Artesian; vice-president, Albert L. Amsberry, M.D., Carthage; secretary-treasurer, John F. Barthell, M.D., Howard; state delegate, Guy E. Burman, M.D., Carthage.

Doctor E. Covell Bayley has decided to locate in Lake City, Minn., taking over the practice of his father, the late Doctor Emery H. Bayley, as soon as he has completed his service as interne at the Jersey City (N. J.) Hospital. Dr. Covell Bayley is a graduate of the Medical Department of the University of Minnesota, and has nearly completed two years of hospital work since graduation.

The North Dakota Tuberculosis Association elected the following officers at its recent annual meeting: President, Dr. Fannie Dunn Quain, Bismarck; vice-president, Dr. B. K. Kilbourne, Fargo; treasurer, Dr. R. S. Towne, Bismarck; secretary, Miss Minnie J. Nelson, Valley City. Dr. James Grassick refused re-election as president after nineteen years of great efficiency and devotion in the work. He retires as head of the Association, full of honors.

The following were licensed to practice in North Dakota at the examinations held by the State Board of Medical Examiners last week: Carl O. Rollie, McClusky; Jake Robert Ostfield, Tuttle; Leon J. Alger, McClucky; Robert W. Rogers, Winnipeg; Clarence A. Johnson, McVille; George D. Gertson, Grand Forks; Leif T. Lohrbauer, Grand Forks; Robert D. Bray, Fargo; Cunnar J. Elstrup, Kindred; Fritz Draper, Hurd; William A. Johnson, Carlisle, Mont.; William J. Stock, Strassburg.

Dr. Gerald M. Koepcke, who is associated with Doctors F. J. and J. A. Pratt, in the practice of Eye, Ear, Nose and Throat, at 919 Metropolitan Bank Bldg., Minneapolis, Minn., has just returned from Vienna, where he spent the summer doing postgraduate work. Mrs. Koepcke accompanied him abroad. Dr. Koepcke has been appointed assistant instructor at the University of Minnesota Medical School in the Department of Ophthalmology and Otolaryngology, and also on the staff of the Minneapolis General Hospital.

Dr. R. D. Alway, of Aberdeen, S. D., back from a postgraduate course in surgery in the famous Vienna clinics, brings report of the tragic poverty which rests upon the people of Austria from high to low. "Everywhere the people are poor," said Dr. Alway, "every thought and endeavor seems to be directed to maintaining their existence by means of hard work and application. Nobody thinks of war any more. They want to gain comfort and competence. Americans are eagerly welcomed for the money they bring and I was everywhere, on the street and in scientific circles, accorded the most courteous treatment. Many of the professors are famous for their skill and learning but they are comparatively poor men. The people have so little money that they cannot pay fees, and students from America who come to take courses of training under them are received with joy. To encourage this all the clinics are now carried on in the English language." Germany is making rapid industrial progress, Dr. Alway said, and the people whose opinion he could sound have no thought of war, only to get the money they must have for taxes and for living. Enroute he stopped a couple of days in Paris and a couple in London but otherwise his time was devoted to the special studies he sought in the center of the scientific world of research in eye, ear and nose practice.

Colonel James A. Barker, Governor of Battle Mountain Sanitarium, national soldiers' home, at Hot Springs, S. D., has received word that his request for a transfer to another institution with fewer administrative duties where he might devote himself to the special field of nervous and mental cases, has been granted, and that he is assigned to Togas Branch of the National Soldiers' home near Augusta, Maine. He is to be succeeded at Hot Springs by Dr. E. R. Linder, second assistant surgeon. At the same time was announced the resignation of Major W. H. Stanley, treasurer, and during the war, acting governor, to be succeeded by V. B. Kincaid, transferred here from headquarters of the national soldiers home board of Dayton, Ohio. Colonel Barker has been active in community affairs of Hot Springs and the word of his leaving has been received with regret by the citizenry. Colonel Barker was one year president of the Hot Springs Kiwanis Club and another was commander of the American Legion Post. The

Legion Post, at its last meeting, when no word had been received, adopted a resolution of general appreciation for his co-operation on the Legion program. Mrs. Barker has been prominent in P. E. O. sisterhood, the Methodist church and Legion auxiliary, serving in an official capacity in each organization.

Meeting of the Sixth District Medical Society of North Dakota

On December 13, 1927, at the Lewis and Clark Hotel, Mandan, N. D., occurred the fifth meeting of the Sixth District Medical Society, for the year 1927.

The meeting began with a five-course dinner, twenty-nine members and two guests were present.

The minutes of the previous meeting were read and approved with the correction that Dr. C. E. Stackhouse, of Bismarck, N. D., chairman of the Program Committee, occupied the chair during the program. (Correction was asked by Dr. Stackhouse.)

Reports were given by Dr. H. O. Brandes, of Bismarck, of a case of carcinoma involving the pancreas and duodenum, probably primary in a duodenum ulcer. The postmortem and pathology were given by Dr. L. W. Larson, of Bismarck, with lantern-slide demonstration.

The case was discussed by Drs. Diven, Constans, and Brandes.

Dr. C. E. Stackhouse, of Bismarck, reported a case of inevitable abortion in which he used ½ c.c. pituitrin per hypodermic with the results that the cervix closed tightly, pains ceased, and delivery of the fetus did not occur till several hours later.

Dr. R. W. Henderson, of Bismarck, reported a case of acute appendicitis with general peritonitis who postoperatively was given, during a period of eighty days, eight liters of physiological saline solution by hyperdermoclysis, 20 liters of 50 per cent glucose solution by hypodermoclysis, and 3,750 c.c. of 25 per cent glucose solution intravenously, without a single reaction from the solutions, and eventual recovery of the patient.

Dr. N. O. Ramstad, of Bismarck, reported a case of what was apparently an inguinal hernia, but which, at operation, proved to be a herniation of the bladder wall through a split in the transversalis fascia medial to the external ring.

Program: Dr. W. L. Diven, Bismarck, chairman of the program committee in the chair.

Dr. J. P. Aylen, of Fargo, gave a very instructive paper on the proper way for case reports in malpractice cases to be made out.

He stressed the point that most case reports as made out by doctors are worse than useless to the patient, the doctor, the company involved, and to the court. With this point in mind he presented model outlines for case reports in various sorts of cases, pointing out common errors and their consequences.

Mr. Scott Cameron, attorney, of Bismarck, discussed medical malpractice suits from the standpoint of the attorney. He pointed out the relations existing between the legal and the medical professions and stated that the main criticism of medical testimony in court was that medical men either could not, or would not, give their testimony in understandable English.

The papers were discussed by Drs. Ramstad and Quain, and discussion was closed by Dr. Aylen and Mr. Cameron.

The business meeting followed.

Dr. F. P. Rasmussen, of Beulah, whose application for membership was passed by the Censors at the October meeting was accepted by unanimous vote.

Dr. J. H. Hoskins, of Rolla, on transfer from the Devils Lake District was accepted.

A letter from Dr. J. Grassick, of Grand Forks, regarding the appointment of a committee on Medical History was read by the secretary.

Motion made to appoint a committee of three on Medical History of North Dakota with Dr. W. H. Bodenstab as chairman was seconded and passed.

Drs. B. S. Nickerson and N. O. Ramstad were appointed as the other two members.

Officers for 1928 were elected as follows: President, Dr. R. W. Henderson, Bismarck; vice-president, Dr. E. J. Larson, Underwood; secretary-treasurer, Dr. L. W. Diven, Bismarck; censor, Dr. E. E. Hamilton, New Leipzig; delegates, Drs. C. E. Stackhouse and H. O. Brandes.

R. W. Henderson, M.D.,
Secretary and Treasurer.

Yankton District Medical Society of South Dakota

At the annual meeting of the Yankton District Medical Society held December 21, 1927, the following officers were elected for the ensuing year: President, Dr. Lottie G. Bigler, Yankton; vice-president, Dr. H. Klima, Tyndall; secretary-treasurer, Dr. J. A. Hohf, re-elected, Yankton; delegates to State Association, Dr. F. M. Stansbury, Vermilion; alternates, Dr. J. A. Hohf, Yankton; Dr. J. C. Ohlmacher, Vermilion and Dr. H. Klima, Tyndall.

Doctor Geo. E. Johnson's term on the Board of Censors expiring, Doctor F. A. Moore, of Yankton, was elected in his place.

The following program was rendered:

Latest Methods in Management and Treatment of Obstetrical Complications. Dr. C. W. Pollard, Omaha, Nebraska. General discussion of the foregoing, with report of cases.

Uterine Lipoma. Dr. Lottie G. Bigler, Yankton, S. D.

Asthma—Treatment of with Ultra-violet Light. Dr. L. F. Beall, Irene, S. D.

Dinner at the Portland Hotel after the business session.

The attendance was good.

J. A. Hohf, M.D.
Secretary.

Annual Meeting of the Third District Medical Society of South Dakota

The Third District Medical Society held their December meeting at Brookings. The attendance was 100 per cent, and the following program was given:

Some Phases of Goiter. Dr. H. L. Youtz, Brookings.

Jaundice. Dr. C. J. Engelson, Brookings.

Acidified Milk in Infant Feeding, with report of its use in premature infants. Dr. H. A. Miller, Brookings.

Medical Economics. Dr. S. M. Hohf, State President, Yankton.

Report of Pending National Legislation. Dr. J. F. D. Cook, Secretary-Treasurer of the State Medical Association, Langford.

This was the first meeting of the Madison District to be held in Brookings since the reorganization of the District. This is a fine plan, it is working well in other districts, meeting at several different places during the year.

The papers received a full discussion, and the Medical Economics, and legislative matters came in for a very interesting discussion and adjourned at midnight. The opinion of all that this was a profitable meeting.

Election of officers for the year 1928 resulted as follows: President, Dr. H. L. Youtz, Brookings; vice-president, Dr. C. C. Hoagland, Madison; secretary-treasurer, Dr. R. S. Westaby, Madison.

The Tri-County Medical Society of North Dakota

At the annual meeting of the Tri-County Medical Society the following men were elected for the coming year: President, Dr. C. R. Critchfield, Fessenden; vice-president, Dr. A. E. Westervelt, Bowden; secretary-treasurer, Dr. H. Van de Erve, Carrington; delegate, Dr. E. L. Goss, Carrington, alternate delegate, Dr. D. W. Matthaei, Fessenden.

Dr. Charles MacLachlan, of New Rockford, read a paper on "Malpractice Suits without Legal or Moral Foundation Menacing the Practice of Medicine."

The situation especially as regards our own state was carefully and thoroughly considered and analyzed in Dr. MacLachlan's characteristic, lucid and polished literary style. It elicited a large amount of discussion, and a motion was made and carried requesting the doctor to present this paper at the coming State meeting.

H. Van de Erve, M.D.
Secretary.

The Mitchell District Medical Society of South Dakota

At the annual meeting of the Mitchell District Medical Society, held at Mitchell on December 15, the following officers were elected: President, Dr. J. H. Lloyd, Mitchell; vice-president, Dr. A. L. Jones, Corsica; secretary-treasurer, Dr. O. J. Mabee, Mitchell; Delegates, Drs. E. M. Jones and E. M. Young; Alternates, Drs. J. H. Lloyd and P. P. Halleck. Dinner was served preceding the meeting and a general discussion on matters of interest to the profession followed the election.

Annual Meeting of the Hennepin County Medical Society

The following officers and members of elective committees were elected at the annual meeting, held January 9, 1928: President, Dr. A. E. Hedback; first vice-president, Dr. E. L. Gardner; second vice-president, Dr. J. M. Hayes.

Executive Committee (elected for three years): Dr. Stephen H. Baxter, Dr. Stanley R. Maxeiner.

Board of censors (elected for three years): Dr. A. S. Hamilton. (Two men tied and to be decided later.)

Board of Trustees (elected for three years): Dr. J. Frank Corbett, Dr. Geo. Douglas Head.

Board of Trustees (to fill unexpired term of Dr. A. W. Abbott): Dr. J. G. Cross.

Delegates to State Convention: Regular, Dr. W. H. Aurand, Dr. S. H. Baxter, Dr. F. A. Erb, Dr. J. M. Hayes, Dr. R. T. LaVake; alternates, Dr. J. C. Michael, Dr. Reuben Johnson, Dr. J. D. Lyon, Dr. Myron O. Henry, Dr. Norman M. Smith.

Erling W. Hansen, M.D.
Secretary.

Annual Meeting of the Northwestern District Medical Society of North Dakota

The regular meeting of the Northwestern District Medical Society was held on Wednesday, December 28, at 6:15, at St. Joseph's Hospital. Minot. The Sisters of St. Francis invited all the members of the Society as guests in honor of the St. Joseph's Hospital staff. The main dining room as well as the tables were beautifully decorated, and a seven-course dinner was served in a sumptuous manner.

After the banquet the meeting was called to order by President Wheelon. The minutes of the last meeting were approved. The application for membership to the Society by Dr. Agnes D. Steucke, of Garrison, N. D., was acted on favorably by the Board of Censors. Dr. Agnes Steucke was unanimously elected a member to the Society and the Secretary was instructed to notify Dr. Steucke.

The Committe report on "Group Nursing," of which Dr. Ransom was appointed Secretary, was not ready. There were no unfinished business, no communications, no new business.

The president called for the scientific program, which was as follows:

1. Empyema of Gall-bladder with Gall-stones, with report on two other cases of gall-bladder disease. Emesis gravidarum and treatment. Dr. Devine.
2. Cholecystography with use of Tetraiodophenolphthalein. Dr. V. J. LaRose.
3. Aneurism Femoral Artery. Dr. P. A. Nestos.

Motion made by Dr. Nestos, duly seconded and carried, that the President and Secretary act as committee of two to decide on date for next meeting and election for the Society.

Motion for adjournment made and carried. The following members present: Dr. V. J. LaRose, Dr. Wheelon, Dr. Erenfeld, Dr. Halvorson, Dr. Ransom, Dr. Kermott, Dr. Archie McCannell, Dr. R. W. Pence, Dr. P. A. Nestos, Dr. Devine, Dr. Hanson, Dr. Yoemans, Dr. J. R. Pence, Dr. Braaflat, Dr. Fardy, Dr. A. Carr, Sr., Dr. O. Haraldson.

O. Haraldson, M.D.
Secretary pro tem.

Coolidge X-Ray Tube for Sale

A slightly used Coolidge X-Ray Tube of medium focus is offered for $80.00. Address 435, care of this office.

Substitute Work Wanted

By an experienced physician graduate of a high-grade medical school and licensed in Minnesota. Address 433, care of this office.

Work or Position Wanted

I am a Minnesota graduate, class of '26, and desire a location, locum tenens work, association, or surgical opening. Address 438, care of this office.

Office Position Wanted

By a young woman with over two years training as nurse; some stenography; and good recommendations from hospital. Moderate wages. Address 441, care of this office.

Association Wanted

Association wanted with group or individual. Capable of general and urological surgery. Training in eastern hospitals, teaching and practice. Address 431, care of this office.

Morse Wave Generator for Sale

In use four years but very little used. In perfect working order. Dynelectron, Model D, made by Liebel-Flarsheim Co. In use three years. In perfect condition. Address 444, care of this office.

Office Position in Minneapolis Wanted

By a woman of large experience in physicians' office. A high-grade stenographer and expert in history-taking, capable of managing a large clinic or a specialist's work. Satisfactory references given. Address 434, care of this office.

Practice for Sale

A good practice and complete equipment in a county-seat town in Central Minnesota; population 2,000. Rich farming community; several churches and best of schools. Reason for selling, am going to specialize. Address 439, care of this office.

Practice in South Dakota for Sale

A seven-thousand dollar practice in South Central part of South Dakota is offered for sale. Hospital accommodations. This offers a good opportunity for a live physician and surgeon. Address 445, care of this office.

Office Position Wanted

By a graduate of the Commercial Department of a District High School with several years experience as legal and medical stenographer, the latter engagement being with a well-known firm of physicians. Can also keep books and take care of office. Address 440, care of this office.

Apparatus for Sale

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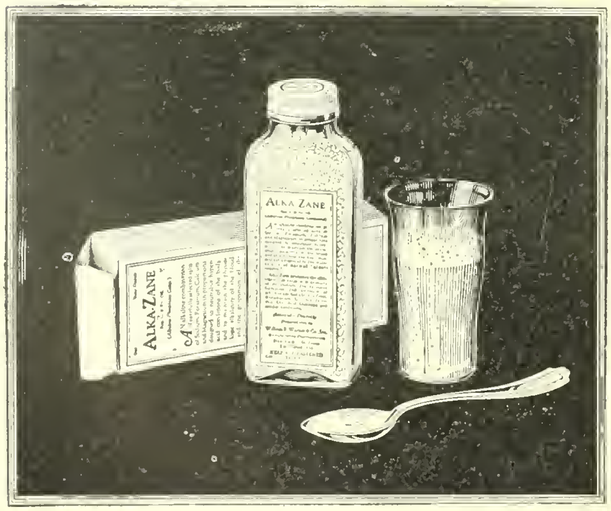

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Dr. Howard A. Kelly, of Baltimore, Hon. Curator of Reptiles at University of Michigan; Colonel J. F. Siler, ex-President of the American Society of Tropical Medicine; Dr. Herbert C. Clark, of New York, members of the Board; Dr. Afranio do Amaral, Director of the Institute; Mr. Raymond L. Ditmars, the well-known reptile expert of the New York Zoological Gardens; Mr. Milton Campbell, President, and other members of the Mulford staff, were present.

They discussed the past and present work of the Institute, and of particular interest was the establishment of the Serpentarium at Tela, Honduras, and the good work done in that country in the collection and field study of the snake problem as it affects agriculture, and the interest of natives and foreigners in the advisability of administering Antivenin Treatment in snake-bite cases.

A visit was later paid to the laboratories, where the work of Dr. Amaral was reviewed and enthusiastically commended. The support of all was pledged to continue the work of the Institute in collecting and disseminating information, and in research work on snake venoms and antivenins.

Dr. Amaral, responding to the call of duty from his native land, returns to the laboratories at Butantan, Sao Paulo, but will retain his connection with the Institute in the capacity of Consulting Director. Qualified scientists, thoroughly trained in his methods and technic, will continue Amaral's work in the production of Antivenin, so that the high standard already set will be maintained in this product "for the conservation of life."

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NEUROPSYCHIATRIC DISORDERS AND HYPERTHYROIDISM*

By E. M. Hammes, M.D.
Associate Professor, Neurology and Psychiatry, Medical School, University of Minnesota
ST. PAUL, MINNESOTA

The interrelationship between disorders of the endocrine system and the many and varied neuropsychiatric syndromes is becoming more and more definitely established. Because of its easy accessibility for experimental observations and for surgery, the thyroid gland has been most thoroughly studied, and varied neurological symptom groups, ranging from a mild psychoneurosis to a marked psychosis, have been associated with thyroid dysfunction. On the one hand, we note the classical picture of cretinism and myxedema with sluggish mentality and myalgic pains due to hypothyroidism; on the other hand, the extreme motor restlessness, the undue psychomotor activity, and the marked emotional instability even to acute maniacal states due to hyperthyroidism.

However, one occasionally encounters a symptom group quite suggestive of thyroid intoxication in patients with a low basal metabolic rate and with clinical improvement under thyroid medication. This was well illustrated in a physician's wife who suffered for about one year from periods of undue irritability and restlessness, attacks of tachycardia, and loss in weight with a basal metabolic rate of —14. Under thyroid medication and rest in bed, she improved satisfactorily with marked relief of her clinical symptoms.

Psychoneurotic disturbances to some extent occur in every case of Basedow's disease and undoubtedly are part of the clinical picture. Their true significance, however, is not definitely understood. The thyroid gland plays an important part in the emotional control of the individual. The French authors refer to this organ as the gland of the emotions, and group Basedow's disease among the hereditary neuropathic disorders. Kessel and Hyman[1] believe that practically all patients with exophthalmic goiter give a history of a diathesis, namely, an autonomic imbalance. They characterize this autonomic imbalance by widespread and divers clinical manifestations of instability of the involuntary nervous system, by the absence of demonstrable organic disease, and by a course punctured by remissions and exacerbations. A flareup in this symptom group may develop through infection, psychic trauma, or emotional stress. Only a small percentage of patients with autonomic imbalance develops exophthalmic goiter, which manifests itself by an increased metabolic rate, by tachycardia, by loss in weight, asthenia, and exophthalmus.

According to Weiss,[2] the psychoneurotic disorders in patients with hyperthyroidism are not caused by the toxemia, but are parallel symptoms of a degenerative constitution, each group of symptoms being able to influence the other. Lewis,[3] in a paper on psychological factors in hyperthyroidism, states that exophthalmic goiter is an aggravated form of an anxiety neurosis, a structuralized fear at the symbolic level and in a measure caused by actual sexual suppression. Any attempt to treat these cases without psychotherapeutic measures will end too frequently in disappointment.

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*Presented at the North Dakota State Medical Association's Annual Meeting, at Grand Forks, N. D., June 1, 1927.

This brief review of the literature, which can be augmented by many similar articles,—Melchior,[4] Munzer,[5] Hyman and Kessel,[6] and Lieb,[7, 8] Lewis,[9] and others—emphasizes the theory that at least in a large percentage of cases of hyperthyroidism the intrinsic factor is probably a constitutional one, either on an unstable neurotic or psychoneurotic basis, on an autonomic imbalance, or on some other hereditary instability. It has been recognized by most observers that individuals who, through environment or heredity, lack assurance and are prone to develop the phenomena of imbalance in the co-ordination of metabolic processes are also more prone to Basedow's disease. On the other hand no such evidence can be elicited in a study of many persons developing exophthalmic goiter, and, therefore, in these cases the psychoneurotic symptoms are attributed to the action of the thyroid toxin largely on the nervous system. (Plummer[10]).

The outstanding psychoneurotic symptoms associated with exophthalmic goiter are strongly suggestive of psychic and motor overstimulation. In the early stages of the disease these patients frequently complain of undue restlessness, apprehension, of a constant "energy drive," of a feeling of well-being, and of an increase in general efficiency. They suffer from insomnia, lack of concentration, are "jumpy," and manifest tremors. Later on marked nervous fatigue, vertigo, tendency to irritability, and depression are not infrequent, and may even develop into delirious states of a toxic type. Woodbury[11] explains this picture by three factors: first, cerebral hyperemia; second, thyrotoxicosis; third, a toxic state secondary to the vast increase of waste products of metabolism.

As neurological consultant for the United States Veterans' Bureau Hospital No. 65, in St. Paul, where every case of exophthalmic goiter and exophthalmic goiter suspect was referred to the neurological department, and also in our own private work, Doctor Kamman and I have had an opportunity to observe a fairly large series, approximately 200 cases. These were classified into three main groups, both from the diagnostic and the therapeutic standpoint. The first group was the well-defined cases of Basedow's disease with the characteristic symptoms of tachycardia, goiter, some degree of exophthalmus, high basal metabolic rate (at least above 20), tremor, loss of weight in spite of excess intake of food, and the usual psychoneurotic manifestations. These cases with the classical syndrome presented few diagnostic problems. However, even in this group, patients were encountered in whom the past history clearly demonstrated that many of the psychoneurotic complaints had existed for years prior to any clinical evidence of thyroid intoxication, and were undoubtedly due, not to thyroid intoxication, but to a constitutional instability.

Kessel and Hyman[12] emphasize the too frequent diagnosis of exophthalmic goiter when the disease does not exist. At Mount Sinai Hospital, where about 8,000 patients are treated annually, they were able to collect in six years less than 200 cases of true exophthalmic goiter, or one case to every 250 hospital admissions, and one to every 5,000 dispensary consultations. In about 80 per cent of the cases referred to them with a diagnosis of exophthalmic goiter, toxic adenoma, or hyperthyroidism none of the conditions were found. Our experience is in accord with these observations, in so far as that when a patient presents himself with a goiter and some indefinite and vague psychoneurotic symptoms frequently a Basedow's disease had been suspected and surgery advised. Cases with a subacute onset, a typical clinical syndrome, and a stable past history are readily diagnosed and respond most favorably to surgery.

Case 1.—Miss A., aged 42, bookkeeper, was seen in consultation, February 26, 1926. Her family and personal history was negative. During November and December, 1925, she had several attacks of severe cold with headache and general malaise, with recovery except for a persistent general weakness. About January 1, 1926, she developed a general trembly feeling all over her body, especially in her right arm. These trembling sensations would occur at irregular intervals of several hours' duration and were precipitated by slight exertion, excitement, or unexpected noises. She described other attacks during which she would be overcome by a feeling of marked weakness with severe cardiac palpitation. These gradually became more frequent and were associated with marked insomnia. About February 10 she noticed an occasional numbness in all extremities and in the tongue. Gradually dyspnea developed during the spells of tachycardia, and she required several pillows when lying down. She was unduly anxious and apprehensive. She had lost twenty-six pounds in two months.

The neurological examination was negative throughout except for a fine, constant, generalized tremor, most marked in her right arm, and a moderate increase of all deep reflexes. Her heart was normal; pulse, 140; hemoglobin, 75 per cent; red blood cells, 4,400,000; leucocytosis, 8,400; blood pressure, systolic 190, diastolic 96; urine, negative, except for a trace of albumin. The basal metabolic rate varied between +56 and +48. She had a small goiter and a moderate degree of exophthalmus.

With rest in bed and sedatives for one month and Lugol's solution, her tremors and restlessness improved, her tachycardia varied between 95 and 112, her basal metabolic rate was +43, and her blood pressure, systolic 158, diastolic 94.

The thyroidectomy was performed by Dr. George Earl, March 26, 1926. She had an uneventful convalescence, and was discharged from the hospital six weeks later with a subsidence of all her neurological complaints. Her blood pressure was, systolic 150, diastolic 70; heart rate, 68-84. No basal metabolic rate was taken. During the last week at the hospital she was informed of the serious illness of her sister, without manifesting any undue emotional reactions. Her good health has continued to the present time.

The second group comprises the mild or markedly psychoneurotic and borderline psychotic individuals who, during some period of their life cycle, have superimposed a moderate degree of thyroid intoxication. The psychoneurotic manifestations which have existed for years become aggravated during these periods with additional symptoms of tremor, tachycardia, some loss in weight, a goiter, and a moderate increase in the basal metabolic rate. Weiss[2] refers to this condition as the neurotic-thyrotoxic syndrome. Careful and repeated basal metabolic studies usually enable one to arrive at a correct diagnosis. The therapeutic problem, however, is a more difficult one. Surgery can offer at the most relief only of those symptoms primarily due to the thyroid intoxication. Psychoneurotic individuals as a rule react unfavorably to surgery. Years of experience have finally emphasized the important fact that the unfortunate neurotic with general visceroptosis will not benefit but frequently suffers an aggravation of his neurovisceroptotic symptoms by meddlesome surgery when rest in bed with thorough reconstructive measures, combined with careful psychotherapeutics, results in marked benefit to the individual. Similarly, the neuro-borderline-thyrotoxic patient should invariably be given the benefit of this form of therapy over a prolonged period before any surgical procedure can be considered.

Case 2.—Miss B., aged 22, was examined August 22, 1925. Her family history negative except that her father is very neurotic. The patient has always been "nervous" and very excitable, and since the age of thirteen has become easily exhausted. In March, 1924, she saw a report in the newspaper of an automobile accident in which her brother was injured. She became "nervous and upset" and had a spell during which she was rigid all over. She gradually improved and remained quite well for one year. Then her nervousness and rigid spells recurred almost daily with marked numbness of her extremities, cardiac palpitation, crying spells, and various phobias. She lost four pounds in weight, her pulse was 90, she had a small goiter, and there was marked restlessness and instability. She was placed on ½ gr. of luminal, t. i. d. In ten days she developed a marked luminal rash with edema of the eyes, lips, tongue, and mucous membrane of the mouth and hands. This was so pronounced that her eyes were swollen shut, she could hardly swallow, nor close her hands. It was followed by general marked desquamation. She gradually became more nervous, had loud crying spells, and developed phobias of syphilis, tuberculosis, and other obscure diseases. She was put to bed in a hospital where she remained for five months. During this time she had attacks of tachycardia, choking spells, marked sweating in the palms of her hands and the soles of her feet so that drops of perspiration would drip off her fingers and toes. Her pulse rate was 90 when quiet in bed but would increase to 140 under excitement or emotional strain. Her basal metabolic rate varied between +12 and +24. She gradually improved, gained twenty-two pounds in weight, and at present is symptom-free except for an occasional attack of tachycardia.

Case 3.—Miss B., aged 22 years, seen in consultation with Dr. C. N. Hensel, April 30, 1927.

Her family history shows that her father is well, but since the age of 55 has manifested an indifference to business activities and to his home and family responsibilities. The mother is suffering from an involution melancholia. One brother has difficulties in his social adjustments, and, although a University graduate, is unable to cope with any responsible occupation, frequently changes his positions and jobs, and at present is employed as a truck driver. One sister and brother are well and unusually keen and successful.

The patient had to discontinue her third year in high school at the age of 19 because of inability to carry on her studies, and, although she constantly expresses a desire to take up a business course or some other occupation, she has never even attempted to do so. She admits that she is a sort of a butterfly type and is passing through life without care or responsibility or a thought for the future. She has had several minor love affairs, the last one during the fall of 1926. Since her friend left St. Paul and went east, in January, 1927, she has been very lonesome, developed insomnia, occasional crying spells, became indifferent, lost interest in her social activities, and was inclined to be somewhat suspicious and preoccupied.

During the night of March 15, after a strenuous dancing party and some drinking, she was suddenly awakened by a marked choking sensation and cardiac palpitation. These symptoms gradually became more pronounced, with an increase in her emotional instability and insomnia. There was no loss of weight, a moderate tachycardia, a small goiter, a fine tremor of the extended hands, and a basal metabolic rate between +19 and +26. At present she is in a hospital, and with rest in bed, isolation from her old associates, and sedatives, she is making satisfactory progress. At the advice of Dr. E. M. Jones, surgeon, she was also given three *x*-ray treatments to her thyroid.

The third group of cases includes the psychoneurotic individuals, particularly of the anxiety neurosis type, in whom symptoms suggestive of exophthalmic goiter manifest themselves. These patients, on repeated examinations, invariably have a normal basal metabolic rate, the tachycardia quite readily subsides with rest in bed, they manifest no abnormal appetite so frequent in exophthalmic goiter, and the loss of weight is usually coincidental with a deficient intake of food. The important diagnostic criterion is the persistent normal basal metabolic rate. This type of pseudohyperthyroidism is more frequently observed in the discharged soldier than in civilian practice, perhaps due to the prolonged physical and emotional strain of strenuous military service. Thyroid surgery is contra-indicated in all these cases, as these individuals do not suffer from thyroid intoxication, but entirely from a constitutionally unstable nervous mechanism.

Case 4.—Was a male, aged 32, a discharged soldier who had seen active service at the front during the World War. His family history was negative. His personal history was negative except that he had been slightly gassed and had suffered from shell shock in September, 1918. He was confined to a hospital for a few months because of indefinite nervous symptoms,—insomnia, marked restlessness, and emotional instability. Since his discharge from service, in February, 1919, he has been doing light work on the farm. He would have periods of several months' duration during which there was a marked aggravation of his neurotic manifestations. He would become unduly irritable, extremely restless, very apprehensive, his sleep would be disturbed by dreams pertaining to his war experiences, and so forth. He was admitted to the United States Veterans' Bureau Hospital No. 65, in December, 1926. His nervous instability had become so pronounced that he required hospitalization. He presented a typical picture of an anxiety neurosis associated with a tachycardia (120), a marked tremor, extreme restlessness, and general asthenia. He had lost twenty-four pounds in weight, food was nauseating to him, and his sleep was poor and disturbed by terrifying dreams. He perspired profusely, was very emotional and jumpy, and cried during the course of the examination. He had a small goiter and a basal metabolic rate of between +2 and +8. All reflexes were hyperactive. There was no evidence of organic disease. With rest in bed and general physical upbuilding a gradual subsidence of his neurotic symptoms was noted. In three months his weight had returned to normal, his cardiac palpitation had improved, his sleep was more restful, and his emotional instability was less pronounced. He returned home and at present is able to do light work around the farm.

Organic neurological disorders are rarely associated with or directly due to exophthalmic goiter. Various gross organic lesions of the brain and spinal cord have been noted in the literature, but the concomitant exophthalmic goiter was undoubtedly coincidental and not causal. Diller[13] reports a case of fatal multiple neuritis in which he believed the neuritis was of thyrotoxic origin. Kappis[14] (1911) in reviewing the literature on this subject collected about forty cases of ophthalmoplegias in which the third, fourth, or sixth cranial nerves were affected. A few cases were reported in which several cranial nerves were involved, suggesting the clinical picture of a chronic bulbar paralysis. Whether the associated exophthalmic goiter bore any causal relation to these paralyses is a mooted question, as there is not sufficient evidence, either clinical or experimental, that thyrotoxins produce any demonstrable pathologic change in the peripheral or central nervous system. In our series of cases none presented any evidence of organic neurological disease.

The various types of psychosis which were formerly thought to be due to exophthalmic goiter have been gradually placed in their proper category as the science of psychiatry has progressed. The concensus of opinion at present is that there is no true form of exophthalmic goiter psychosis except the confusional or toxic type with delusions, hyperactivity, disorientation, and so forth. This toxic delirium differs in no way from that due to other causes, such as seen in fevers, puerperal conditions and exhaustion. Parker[15] states that at the Mayo Clinic less than 2 per cent of their exophthalmic goiter cases presented any evidence of mental disturbance, and that since the introduction of Lugol's medication goiter crises following operation have been less frequent with an associated decrease in the postoperative toxic delirious states. Foss and Jackson,[16] in a study of 800 goiter cases, found evidence of insanity in only two cases, the mental disturbance being one of mild excitement or transient mania. In a similar study of 1,700 insane patients they observed a goiter in only 50 cases, and it was their opinion that there is apparently no relationship between goiter and the various types of insanities. Woodberry[11] states that the thyrotoxic psychoses do not deserve a separate classification. Furthermore, Sattler believes that there is no typical Basedow's psychosis, but that in predisposed individuals the additional toxins of hyperthyroidism precipitate the mental disorder. White,[17] on the other hand, describes the mental state accompanying exophthalmic goiter as one of fear and apprehension and that this frequently is associated with hallucinations of hearing and vision.

According to Wright,[18] the mixed types of confusional and manic depressive psychoses frequently are due to hyperthyroidism. Similarly, Farrant[19] states that either excessive or deficient internal glandular secretions, especially of the thyroid and pituitary, induce altered mental states, rendering the patient insane or liable to insanity from slight mental stress.

Our experience has been somewhat limited as very few goiter patients presented an associated psychosis. A case of involution melancholia with a tachycardia, goiter, and basal metabolism +26 presented the usual characteristics of this form of psychosis; another case of dementia precox with a goiter, marked loss in weight, tachycardia, and a normal basal metabolic rate was quite typical in its psychotic course. In neither case was surgery advised. A case of melancholia of seven weeks' duration—previously reported[20]—with hyperthyroidism, quite suddenly became acutely maniacal, which continued for two days, followed by coma and death.

Our cases of psychoses encountered with hyperthyroidism could readily be classified in, and had the usual characteristics of, the ordinary types, and were evidently only an associated condition.

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THE TREATMENT OF PULMONARY TUBERCULOSIS. CAN IT BE MADE MORE INTERESTING FOR THE MAN IN GENERAL MEDICINE?*

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It is a well-known fact that many physicians do not care to treat patients with pulmonary tuberculosis. The reasons for this attitude are the bad results encountered, the length of time necessary for the treatment, and the old prejudice against the disease. The physician is willing to treat the more or less self-limiting diseases, which run their course in a comparatively short time, and he would not think of turning away a case of subacute bacterial endocarditis or one of pernicious anemia, though neither of them offers any better prognosis than does tuberculosis.

The bad results in the treatment of tuberculosis are due, I feel, in a great measure to the fact that the physician does not appreciate the principles involved. If these underlying principles can better be appreciated many patients may be returned to their homes sooner, and thus relieve our already overcrowded sanatoria.

Even though the subject is a rather old one, anything which can be added to benefit the patient and to increase the enthusiasm of the physician, thus making him more willing to accept this type of case, will justify itself.

The physician with increased interest in treatment of tuberculosis will find that his tuberculous patients will consist largely of those who have been confined to sanatoria and leave either for financial reasons or because they have become "fed up" on sanatorium life. Another type will consist of those who have been discharged, with their disease quiescent, and who need months of careful watching, and a third type consists of those who will not go to a sanatorium at all. This situation, then, requires a knowledge of the treatment of all stages of pulmonary tuberculosis.

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In the past the physicians have advised the patient with tuberculosis "to go west and rough it," or to "sleep out-doors and eat lots of eggs and milk." With these indefinite instructions the patient has passed out of the physician's hands. It is because these various types of treatment have occasionally produced results and because the physician has been willing to pass this type of cases on that the present mode of treatment has been so long in developing. The need of stressing good food has been relegated to the sideline because in these days of prosperity few of us neglect our stomachs; and the air in the home is purer, due to more efficient and cleaner methods of heating and lighting. But the necessity of emphasizing rest in the treatment of tuberculosis is our problem to-day.

Rest is the essential thing in the treatment of tuberculosis of the lungs. It is *the* treatment. It is not the trend of the times; it is the outgrowth of years of study and experience. It is easy to think of the necessity of rest and its accompanying avoidance of strain in the treatment of tuberculosis by considering the morphological tubercle with its layers of epithelioid cells, lymphocytes, etc., which are supported by protoplasmic processes of these cells, by reticulum, and by fibrin, the whole constituting a very delicate structure. It takes time, and in some cases a long time, for fibrosis to take place, and any strain therefore during this formative period weakens or breaks the wall of the tubercle. The surgeon would not think of allowing a man with strangulated hernia to walk to the bathroom, and even though the wall of the tubercle is at times more easily damaged, many physicians seldom think of denying this privilege to a patient.

Krause,[1] appreciating the dangers involved in strain and in lack of rest, expresses himself thus: "It is the writer's opinion that no one can deny the influence of strain on the production of tuberculous disease, and for this reason he has always been amazed that everyone will not face squarely the issue of relief from strain in the therapy of tuberculous disease and give it the prominence it deserves."

Before treating pulmonary tuberculosis it is essential that the diagnosis be made; but after making a diagnosis no one is any more justified in sending a tuberculous patient, on whom he has just made a diagnosis, from his office with the advice: "You must take a rest," than he is in sending a diabetic patient away with the advice: "Cut down on your carbohydrates." Like the diabetic, the tuberculous patient must be given definite and detailed instructions. These instructions should be preferably written. The tuberculous patient must know exactly what he is expected to do and when he is expected to do it. He must also be given the reason for the adherence to this routine because co-operation can better be expected if reasons are given than if they are not.

Again, like the diabetic, ofttimes the treatment is best started in a hospital where he may have constant supervision. If it is impossible or inadvisable for the patient to go to an institution at once, the patient's written instructions should include a daily schedule. The following will serve as a guide in making up schedules for your patients:

7 A. M., Awaken
7:30 to 8, Breakfast
8 to 9, Rest
9 to 10:30, Reading
10:30 to 11:45, Rest, etc
11:45 to 1, Dinner
1 to 3 P. M., Rest
3 to 4:30, Reading and writing
4:30 to 5:30, Rest and radio
5:30 to 6, Supper
6 to 7:15, Rest
7:15 to 8:30, Radio and visit
9, Sleep

Remain strictly in bed unless otherwise ordered.

Record temperature and pulse at 8 A. M., 12, 4 P. M. and 8 P. M.

Eat the same kind of food that the family eats. If desired, drink milk at 10 A. M., 3 P. M and 8 P. M.

Sit up in bed to eat; otherwise, remain in a recumbent position.

There must be some individualization in this therapy, as well as in our other types of therapy. It is very possible that a high pressure salesman—in the habit of traveling at night and working in the day time—would not be able to follow out this particular schedule at once. He might be started on a schedule not quite so strict, perhaps allowed to go to the dining room for meals, and then after a few days accommodation be put on a similar schedule to that outlined above.

One finds very few people who cannot quickly adapt themselves to a schedule of this kind and if a still more rigid regimen is needed because of high fever, hemorrhage, or other signs of toxemia, or complications, it can be adopted, that is, spoon feeding of the patient and reading to him rather than allowing him to exert himself. All patients should be started on a strict regimen. The length of time each is kept on this will depend on the individual's condition and the extent of his disease. An incipient case need not follow it as long as a far-advanced case, but many mistakes have been made by allowing the incipient case to feel that he has very little disease and therefore requires very little treatment. He usually loses his toxemia quickly, if he has had any, and begins to pick up and one must not be fooled by what Laennec called *false convalescence*. The more rigid the initial treatment, the more beneficial the result and the less liable he is to break down with this disease which shows such a tendency to recur.

We have several working rules in our institution which we find very helpful and which act as guides for us when our patients become restive. The two most important rules, I think, are the following:

1. Keep the patient in bed as long as he shows signs of improvement. This of course includes evidence of improvement as shown by *x*-ray, symptoms, and physical findings.
2. Keep the patient in bed with a normal temperature for a period equal to that of increased pulse and temperature.

So frequently patients come to us with relapses and we find that in their treatment they have been allowed out of bed as soon as their temperature becomes normal. In a disease which has to burn itself out, so to speak, as does tuberculosis it is wrong to expect to find, after a long course of fever, sufficient scar tissue about the focus of disease to permit the patient to leave his bed the day he is free from fever.

Within the past few weeks a patient has come to us after being treated in another institution for three years, during which time she had several hemorrhages. When asked how long she had been kept in bed after each hemorrhage, she replied that she was allowed to go to the bathroom as soon as she stopped streaking.

Because a lesion of tuberculosis heals more slowly than that of another germ, we feel that the healing at the time when streaking stops is not sufficient to permit of privileges.

If it seems that the patient has reached the limit of improvement to be obtained by strict bed rest, the doctor is justified in relaxing a little on the regimen. He may perhaps allow the patient to sit up in bed a half hour each day in addition to his meals. From time to time, a half hour can be added until later the patient may be allowed to sit up in a chair, while a still later step is the addition of bathroom privileges, one by one. Once in two weeks is often enough to add to these privileges. The tendency of most doctors is to advance their patients too fast. The following actual case history will show you how slowly we go and what we are able to accomplish by doing so.

The patient entered Glen Lake Sanatorium March 22, 1926, and was immediately put to bed. He was a physician who had had an active practice, and upon his arrival he had not recovered from the shock of diagnosis. He found lying in bed irksome, and he was a bit despondent the first few days and, like all other patients, objected to the use of the bed pan. After a few days he had completely oriented himself, and the time went by more pleasantly in spite of the fact that we did not allow him to read for the first six weeks. During this period his temperature and pulse were normal, and he stopped coughing and expectorating. He, mind you, was a far-advanced case with findings in both lungs. After three months his physical signs and *x*-ray showed quite a clearing up, and we allowed him to sit up in bed to eat. At the end of six months, examination and the *x*-ray showed further progress had been made in the formation of fibrosis. It, therefore, seemed safe for us to allow him more activity. Bathroom privileges were added one by one over the next three months' period, and reading and writing in bed were allowed without restriction during the hours not observed as rest hours. At the end of nine months another *x*-ray gave evidence of more clearing, and it was deemed advisable to permit tub baths. Although he gained forty pounds and was afebrile from the very first, the value of his prolonged bed rest is illustrated in his physical examinations and in his Roentgen studies. (See Figs. 1 and 2).

The physician who relies on diminution of symptoms and increase in weight will find himself often misled because we see patients who are entirely without symptoms, but who show extension of their disease.

As soon as a patient has privileges we think it advisable for him to keep an activity chart. In this way we feel that we can check up on him, and he on himself, thus ascertaining whether he is following our instructions to the letter, or whether he is relaxing a little on this point or a little on that point. It is so easy for all human beings to feel that "just this one time won't matter," or "just this little bit extra won't do any harm," and thus they gradually slip far from our original intention. But the activity chart gives him the facts in black and white. The value of this is illustrated by a recent happening at Glen Lake. One of our patients, who has one bathroom privilege daily, was gone from his room 1½ hours, which certainly was a far cry from what we expected when we granted the privilege.

ACTIVITY CHART

Date	Time in bed	Reading	Writing	Handwork	Walking	Prescribed Exercise
1						
2						
3						

While it is hard to convince the patient of the necessity of going to bed and remaining in bed during the early part of the treatment, we find that the "building up" phase or the phase in which exercise is allowed is a still harder period of treatment.

The patient who has been free from toxemia for weeks and weeks and looks well and feels well finds it very difficult to conform to the slow gradual increases in exercise that are so necessary for him at this time.

It is at the beginning of this exercise period that we introduce the so-called exercise chart on which we ask the patient to record his temperature and pulse immediately after he returns from exercise and again one-half hour later.

EXERCISE CHART

Mo.		Temp.		Pulse	
Day	Amt.	On Return	½ hr. Later	On Return	½ hr. Later
1					
2					
3					

We find that the patient's pulse normally is from 5 to 10 beats higher and his temperature from one-half to one degree higher immediately after exercise than it is one-half hour later. Should the temperature or pulse fail to drop within the half-hour's time, we feel that possibly the exercise has done some harm.

These various charts are in no way to supplant the usual physical examination and frequent *x*-ray of the patient's chest. It is only by utilizing all of the means at our disposal that we are better able to treat our patients. It is our custom in sanatorium work to examine the patients once in six weeks and to *x*-ray our "exercise" patients at least once in three months. The necessity of the latter has been forcefully driven home the past year because three of our exercise patients have shown extension of *x*-ray findings without any symptoms or without the extension being discernible by other means. The patients on exercise are interviewed every two weeks, and their various charts and progress studied. If there is no contra-indication their exercise is increased, the incipient case being allowed from thirty to sixty minutes, while in the far-advanced case the increase is seldom more than twenty minutes. At present we deem it advisable to keep a patient in our institution for a period of three to four months after he has four hours exercise. If, at the end of this time, there is no evidence of spreading of his disease, we feel that he can start working one-half day and gradually be advanced until he is back on full-day schedule.

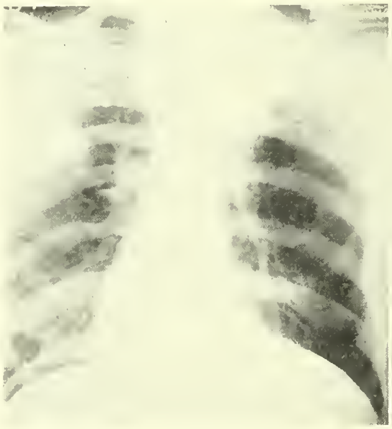

Fig. 1

Figure 1.—Pt. L. L. on admission. Hazy parenchymal infiltration above the 3d rib on the right side with probably small cavity opposite the 1st rib with hazy infiltration in the 2d, 3d, and 4th interspaces on the left.

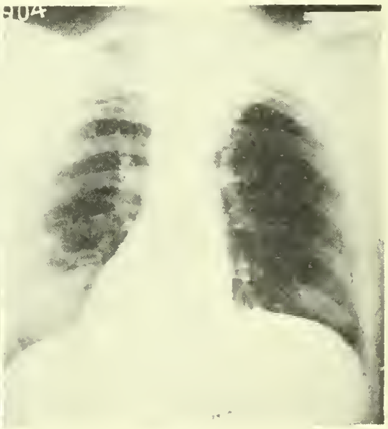

Fig. 2

Figure 2.—Pt., L. L. twelve months later. The cavity which has been described is not now visible. There has been a rather marked decrease in the infiltration of the right upper lobe and left upper lobe.

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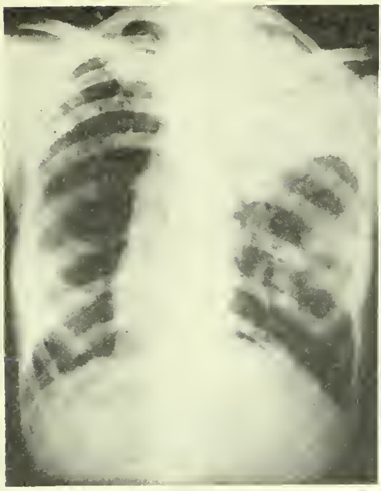

Fig. 3

Figure 3.—Pt. C. M. on admission. There is a hazy infiltration about the 3d rib on the left side and a massive infiltration above the 3d rib on the right side with a hazy infiltration extending to the 6th rib below.

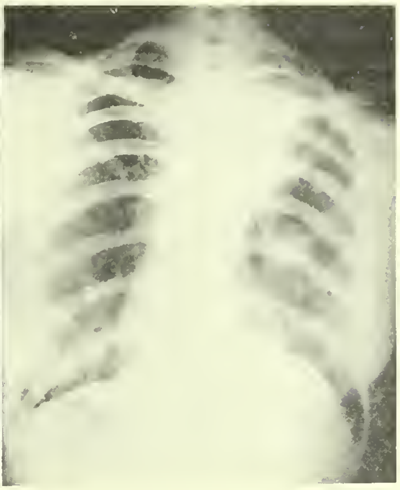

Fig. 4

Figure 4.—Pt. C. M one year later. Confined strictly to bed for 2 months, then allowed to go to bathroom once daily thereafter. The massive inflammatory process above the 3d rib on the right has almost completely cleared up and there has also been a reduction of the infiltration in the 3d and 4th interspaces. The hazy infiltration on the left has shown considerable clearing.

Prolonged rest and supervised exercise, then, are the essentials in the treatment of tuberculosis of the lungs. It is true that pneumothorax, thoracoplasty, phrenicotomy, and various other means of intensification of rest are used in treating far-advanced cases. But these intensified means are applicable to only a small portion of cases (less than 20 per cent), and practically all these patients require institutional care.

I feel that if the physicians will follow out a system of intensified rest and supervised exercise in treating cases of pulmonary tuberculosis, a method applicable to over 80 per cent of the cases, the work will be much more interesting.

DISCUSSION

Dr. J. G. Lamont (San Haven, N. D.): I am pleased that the Acting Secretary of the Association is given this opportunity of commending Dr. Jennings for this especially interesting and practical paper and of congratulating the Association upon its presentation. I must confess that my sympathy is with the man in practice because he is forced to deal with an economic, as well as a medical, problem. When the wage-earner is ill the economic phase and the physician's relationship to it must first be considered. However, if the average sanatorium director has any regret after a term of service, it might be because the cure-program is too often hurried or that patients, following their own inclinations, have been allowed exercise privileges too early, or have left the institution "fed-up" upon routine and returned with a relapse of the disease. If this is true of sanatorium results, how much greater is the responsibility of the physican who undertakes home treatment without the advantages of close supervision and the convenience of a hospital.

Special symptoms, for instance, cough, are productive of strain. It is quite remarkable how cough may be controlled through the will power of the patient. Constant urging and the explanation that much of the cough is unnecessary and that nature provides means, namely, ciliated epithelium, for the upward propulsion of sputum is usually sufficient to secure co-operation of the patient in this regard. Distaste for food is due to the 25 or 30 per cent of intestinal tuberculosis. Bland diet, therefore, is a necessary part of the rest program.

I am glad to have had the opportunity to hear this very interesting paper.

Dr. James K. Anderson (Crookston, Minn.): I wish to say that one of the sets of pictures Dr. Jennings showed you are pictures of my lungs, and as a living result of Dr. Jennings' rest cure I stand here to-day. I assure you he is no more pleased with the showing of these pictures than I am myself. I am connected with the Sanatorium at Crookston, Minnesota, and have some of the patients of your members there.

When we understand the physiology and pathology of tuberculosis and realize and understand that this disease demands an increase in energy we certainly should conserve energy by rest. Dr. Joslin, of Boston, has shown that it requires 50 per cent more energy to sit up than to lie down. If this is true in diabetes it is likewise true in tuberculosis. I insist on rest treatment just as long as possible. Our schedule at Sunny Rest Sanatorium is much like that of Dr. Jennings. We must think of the patient and his pathological physiology rather than the infiltration that is in the chest.

I try to discourage home treatment, for it is very difficult to carry out and much easier to control a patient in an institution.

Dr. Lamont mentioned the cough. I think 80 per cent of the coughing is absolutely unnecessary. The majority of patients who have tuberculosis feel that they must cough, but this is largely unnecessary.

I enjoyed Dr. Jennings' paper and congratulate him on its presentation.

Dr. John E. Hetherington (Grand Forks, N. D.): I enjoyed this paper for I have been at Glen Lake and seen some of the excellent results Dr. Jennings has obtained, not only the *x*-ray plates, but the patients themselves. I have patients come to the office and say they have been told that they have a "spot" on their lung. I think this term is abominable and should be forever discarded.

Dr. Jennings brought out one point of particular interest, and that is the quiet, symptomless extension. I consider that a very important point, and if we watch the lungs carefully we shall see it not infrequently.

Dr. Jennings (Glen Lake Sanatorium, Oak Terrace, Minnesota, closing): What Dr. Anderson and Dr. Lamont said about cough is perfectly true. Most patients do cough unnecessarily. It is very hard to make them realize this fact, for they feel that every cough impulse must be obeyed.

Dr. Lamont is right in saying that a plain diet, that is, one free from cellulose, is necessary in tuberculosis of the intestines when that complication arises, but I tried to confine my remarks particularly to tuberculosis of the lungs.

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ADDRESS AT THE ANNUAL MEMORIAL MEETING OF THE HENNEPIN COUNTY MEDICAL SOCIETY*

By Theodore Christianson
Governor of the State of Minnesota
ST. PAUL, MINNESOTA

I am glad to participate in this program, given in memory of members of your organization who have died within the year. I did not know any of them intimately enough to make it fitting or proper for me to engage in personal eulogy. Indeed, I suspect that no such eulogy is necessary. I also suspect that if any of your departed fellows were able, by some form of telepathy, to communicate with you from beyond the veil, they would dispatch the message, "Do not send flowers." Undoubtedly, they would rather live and grow in the influences they sent forth while here than be decorously embalmed in honeyed words, and buried under the fast-fading flowers of encomium.

There is one form of immortality that we know here and now,—the immortality of a potent and beneficent influence. Life is unending when it continues in the lives of others. A soul survives the shock of death when it continues to give hope, inspiration and cheer to those who live. And I know of no one more likely to achieve that form of immortality than the doctor.

Who can conceive of the end coming to a character like Ian MacLaren's Dr. MacLure. Do you think his memory ever died in Drumtochty or that his influence ever waned among his Scotch neighbors? The very "look o' him" is still victory for the patient. People of the country side far and wide—and, indeed, throughout the world—have come to love the tall, gaunt, loosely made man, his face burned dark-brick by the weather, his hands huge but delicate as a woman's, in a surgical operation. Across the fields of Scotland his voice still hurls salutations, strong, yet tender in its notes of intimacy and sympathy.

To be sure he wasn't modern, but that does not make his influence less potent. He used to blister to cure the ills that flesh is heir to, on the outside; and for the inside, Epsom salts did their work. There was no herb on the hillside he "dinna ken." He was accustomed to fight, not only with flood and storm, as he did when he traveled for miles on horseback to minister to his patients, but, like other doctors, with death itself, as he did when Neighbor Saunders was desperately ill with a fever. When Saunders came safely through, he was so elated that his rheumatic body indulged in the highland fling. He "hadna shaken his legs" for thirty years, but they now responded to his joyous spirit. They did so with the more alacrity, no doubt, because, after a celebrated doctor from the city had given up the Saunders case as hopeless, Dr. MacLure had brought victory out of apparent defeat. Such was his reputation that his friends and patients believed he could tell what was wrong with the body at a glance, and the "wonder constantly grew that one small head could carry all he knew."

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*Held in the Library Rooms of the Society, November 2, 1927.

Do you suppose a character like that could die?

Is not his soul still marching on?

Still was he essentially different from the doctors whom we all know? Indeed, can we not in every line of Ian MacLaren's picture see something that we recognize in our own family physician? Can you not see in the devotion to duty, the patience, the skill, the sound judgment, the unerring vision of Dr. MacLure the qualities which you admired in the comrades whose memories you are recalling to-day; for, although the technic of medicine changes from decade to decade, the spirit of the true physician remains the same? The doctor has not lost his soul by gaining knowledge. While his ability to do good has expanded he has not lost his disposition to do it. The doctor is, of course, now more specialized and less universal in his functioning, but he has lost none of his interest in his patients as men and women; they are still human beings, not clinical material. The new doctor makes less resort to pharmaceutics than the old, but he is more accurate in diagnosis, more skilled in surgery, and he has a much larger grasp of the factors contributing to health or disease of body and mind.

The new doctor aims at the prevention of disease, as well as its cure in individual cases. Up to the Nineteenth Century sickness and disease were regarded as purely private matters. To a degree people still clung to that contempt of the body which was a hang-over of the asceticism of the Middle Ages. Plague after plague rioted through hamlets and cities on the European continent, carrying off thousands of people. As late as the Eighteenth Century, men blamed God for sickness. Disease was a visitation of Providence.

When Louis Pasteur established the relationship between fermentation and bacteria, and Robert Koch proved that diseases are caused by germs, and not germs by disease, the responsibility for human ailments shifted from God to man, and medicine became a thing of social concern.

When the American troops went to Cuba, in 1898, the enemy most feared was not the Spanish army but yellow fever, which had always infected the Tropics and occasionally had come to various American cities to spread terror and death. In 1900 Dr. Walter Reed, of the Army Medical Staff, was placed at the head of a commission to discover whether yellow fever was spread by mosquitoes. Verification by the commission of the mosquito theory of yellow fever made it possible to rid the Tropics of that malady. Using the knowledge made available by the commission, Dr. Gorgas and his co-operating physicians made the Panama zone, once one of the most disease-ridden spots of the earth, healthful. The scourge of the Tropics was completely uprooted, the general death rate was reduced 90 per cent, and the Americans were enabled to build the Panama Canal after the French had failed.

A notable triumph of the New Medicine was seen in the Great War. Although fought in trenches by men living in dug-outs, under conditions which ordinarily would have bred disease, it was the only war in our nation's history in which more men did not lose their lives from disease than on the field of battle.

Ever since the true character of contagion was discovered, medicine has progressed in socialized activities. Great foundations have been established, the most notable of which is the Rockefeller Foundation, with an endowment of $82,000,000; maintaining medical centers, advancing research and campaigning in behalf of disease prevention in at least twelve states of our Union, in China, in India, and in the Islands of the Sea.

Moreover, trailing microbes, carrying off poisonous waste, providing pure water, fresh air and cheerful minds, have become matters of Government concern and activity. The prevention of the spread of infection has become a matter of co-operative effort among the nations. All of our American States now have public health administration, quarantine laws, pure-food laws and building restrictions. Free clinics, free dispensaries and free hospital treatment for those who cannot pay are becoming increasingly common. In fact mortality, child welfare and intelligent care of mothers have taken their place in our program of public welfare; and in many other ways, too numerous to mention, the social character of disease is recognized, and government and various social agencies co-operate to stamp it out.

In other words, the doctor is no longer merely a healer of the sick: he is a crusader who goes forth to prevent the spread of disease; he is a teacher who instructs the people, telling them how so to live as to be free from sickness, even when by teaching them he reduces the income from his own profession. Perhaps teaching is the doctor's noblest function. What greater service can any man render than to bring knowledge to the people that they may have life and have it more abundantly?

I said the doctor is a crusader who goes forth to prevent the spread of disease. Indeed, he has seen many scourges, like tuberculosis, typhoid and malaria, brought under control. Through the application of hygiene, sanitation, quarantine and antitoxins he has increased the average span of life twenty years.

Through the study of glands, he has thrown new light upon the old problems of heredity, human maladjustment and unsocial behaviour.

No profession has shown a more remarkable record of progress during the last fifty years than has that of medicine. I believe the people sense this and have a more substantial and more widely spread confidence in the medical profession today than they ever had in the past.

As a layman I cannot presume to consider with you the technical and social problems of your calling. Some of these social problems gather about the mounting cost of securing a medical education, and the too great expense of being sick and receiving hospital care. As a group of professional men and women you are awake to these problems, as your journals and the records of the proceedings of your association meetings indicate.

As a worker in another field, I am impressed with the greater progress made in the field of medicine than in that of any of the social sciences. You medical doctors are doing so much better with the physical body than we political doctors do with the body politic. Your rapid progress did not come by chance nor by good fortune. Neither can the great advance in medicine be credited entirely to specialization, although specialization no doubt has been a progressive influence. Much specialization has taken place in industry also, but it can hardly be said that improvements in the field of industrial relations and in the human phases of industry are as marked as they have been in medicine. More than specialization, therefore, is required to explain the great and rapid advance in your field.

Much of the advance, it seems to me, must be attributed to the fact that physicians and their co-workers in the laboratories and clinics have given up arm-chair speculation as vain and futile, and have attacked specific and definite problems in a concrete way. They have plotted off the field, giving to each plot intensive treatment until it yielded its secret. This was the method pursued in the conquest of smallpox, typhoid and tuberculosis. It is being used to-day in the modern medical attack upon cancer, goiter and other problems. When experts thus plot off their field and study it intensively in the laboratory and in the clinic, they are generally rewarded by discovering new truth and gaining new mastery.

The doctor of the past had intimate human contacts and fine ideals of sacrificial service freely given. To these the new doctor has added a more generous knowledge, improved tools and greater skill in the use of them, and more exact and searching methods of investigation and inquiry. He is protected by laws safeguarding his right to experiment and to pursue truth wherever he may find it. Much of the hope of this generation is that men are beginning to do systematically and intelligently what they have long only dreamed, or sought in haphazard and bungling ways. When a profession adds science to devotion, it should go far.

In the pursuit of the fine ideals of service which obtain in the professions, men are achieving a new sense of values. When a man dedicates himself to a great profession, like medicine, the dollar ceases to be the only yard-stick of success. I am wondering if the day when money is the measure of a man is not due to pass in industry and business also. It is a fact that much of the massed wealth of the present day has been accumulated through the exploitation of natural resources. These resources have been largely used up and exploitation will not be possible in the future, as it has been in the past. The inevitable result, I believe, will be that ultimately a man's value, a man's worth, a man's dignity will not be measured by the property he possesses, but by the contributions he has made to the welfare and happiness of his fellow-men.

The challenge to service and idealism which your great profession presents approaches the challenge of religion. The founder of Christianity taught that he is the best man, the richest and happiest, who has served his fellow-men the best and most. So is it not right to say that those who heal the sick, who relieve human suffering and promote human welfare, who seek truth fearlessly and who serve generously even the lowliest of the earth, are on the road to Nazareth? It is said that when the great architect, Sir Christopher Wren, was rebuilding St. Paul's Cathedral in London, he went one day, as was his custom, to visit incognito the masons and stone-cutters who were at work on the temple.

Of the first worker whom he addressed, he asked, "What are you doing?" To which query the worker replied, "I am cutting a stone."

Addressing a second, Sir Christopher asked, "What are you doing?" To which the worker replied, "I am earning three shillings, six pence per day."

Addressing a third worker, the great architect asked, "What are you doing?" At which query the worker proudly raised his head, squared his shoulders and replied, "I am helping Sir Christopher Wren build this great cathedral."

That is the spirit which inspires the master workman, whether he build in wood or stone or the tissues of the human temple, the tabernacle of flesh and blood and brain: I am doing a small part of a great work, which would be incomplete without my effort, and which will perpetuate and make immortal the best effort and thought and vision that I can put into it!

THE NORTHWEST CONFERENCE FOR CHILD HEALTH AND PARENT EDUCATION

By Richard Olding Beard, M.D.

Professor Emeritus, University of Minnesota; Executive Secretary to the Conference

The Director and the Officers of The Northwest Conference for Child Health and Parent Education appreciate the courtesy of The Journal-Lancet in offering its pages freely to the promotion of this educational movement.

The following provisional announcement will serve to carry along the thought of readers of The Journal-Lancet towards the days of the coming Conference.

The slogan of the Conference is "The Call to Positive Health for the Child." In that conception, realized, lies the hope of betterment for the race. Surely in no better business can any of us be engaged than in the business of borning, rearing, training better children. Its realization depends, however, upon the recognition of the fact that the child must be studied and its health considered as an entity; that physical, mental, moral, social well-being are all one.

By way of information, the following facts may be noted for further reference:

1. The Conference is to be held in the City of Saint Paul.
2. It convenes on March 27th, 28th, and 29th.
3. Its formal daily sessions will be conducted in the Saint Paul Auditorium, which has a seating capacity of 3,200. It will be equipped with loud speakers of the latest models. Daily morning sessions will be called to order at 9:30, and daily afternoon sessions at 2:45. Evening meetings will be held on March 27th and 28th at 8:00 p. m.
4. The Saint Paul Hotel will serve as the social headquarters of the Conference. There the two daily luncheon round-table meetings will occur and the banquet will be planned for Thursday evening, March 29th.

The program of the Conference is in process of arrangement. The names of speakers will be announced soon. Meanwhile it may be of interest to note that the program is planned to stress the pre-school period, the school-age period, and the adolescent period.

The topics chosen may be of interest to study:

"The Child of Health"
"The Present Status of Immunization"
"The Adjustment of the Handicapped"
"Mental Handicaps"
"Special Sense Handicaps"
"Structural and Defect Handicaps"
"The Exceptional Child"
"Education and Social Hygiene"
"Sex Education"
"The Adolescent Girl"
"Vocational Training and Guidance"
"The Adolescent Period"
"The Family Council"
"Parental Education"
"Character Education"
"Home Management and Behavior Problems"
"The Need of Continuous Health Supervision of the Child"
"The Newer Aspects of Discipline"
"The Pre-School Child"
"Habit-Training in the Young Child"
"Understanding and Enjoyment of the Child"

It is possible that some variation in the statement of these topics may be made in consultation with speakers, but they will cover substantially the stated ground.

The purposes of the Conference were outlined in the early January number of The Journal-Lancet. They are becoming more and more familiar to the public at large as time goes on.

Parent Education is a familiar thing in the minds of many mothers. It does not yet make so easy an approach to the consciousness of fathers. Very definitely it interests the up-to-date teacher,—the foster parent of the child. In fact, health and education are becoming school-room partners.

The significant thing about such a program as this is that it interprets health not in the terms of recovery from disease,—disease which in its very incurrence is so much a matter of loss; in its remedy so much a matter of waste motion,—but rather in terms of betterment, of positive values.

The focal point is the teaching of the parent. With her, and even with him, rests the welfare of the child, and she or he must be taught. There is a conscious hunger for information in the parent mind. A healthy mental appetite which quickly catches the distinction between opinion and impersonally valid truth. The physician should be taking up the task of the teacher in the home, but in these days he has many competitors in teaching with whom he must keep in step. He cannot do better than to match his mind with theirs in such parent education conferences as this one we are soon to attend in Saint Paul.

DEMONSTRATION OF EPIPHYSEAL LINES*

By H. E. French, M.D.
Dean of the School of Medicine of the University of North Dakota
GRAND FORKS, NORTH DAKOTA

My part on the program is not a paper; it is a brief demonstration of some of the material we are collecting and using in our teaching at the University. I venture to do this, and have been encouraged by the Committee on Scientific Program, because I think we might all be interested in returning to our earlier training for a few minutes. I hope particularly that surgeons, roentgenologists, and any others who have to consider the long bones and the joints in young people may find it worth while.

Dr. French then very briefly called attention to a series of preparations mounted on beaver board, representing the bones of the shoulder and the pelvic girdles and the bones of the extremities, in a child at birth, a child at one year, a child at thirteen, an adolescent person at twenty, and an adolescent monkey. He said that these preparations and the series of *x*-ray pictures would remain on exhibition during the remainder of the session.

A series of lantern slides prepared from *x*-ray pictures and covering the same features in persons of five, six, ten, fifteen, sixteen, and twenty-five years was then presented. The position of the various secondary centers was pointed out, and their progress and final union were noted.

Transverse lines showing in some of the pictures of long bones above the epiphyseal lines probably mark temporary arrests due to earlier illnesses not necessarily rickets. (See article by Harris in *Archives of Internal Medicine*, December, 1926.) The acromion is not infrequently found ununited to the rest of the scapula in bodies of adults in the dissecting room.

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*Presented at the Forty-Sixth Annual Meeting of the North Dakota State Medical Association, held at Grand Forks, N. D., June 1 and 2, 1927.

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INSANITY AS A DEFENSE IN CRIME

The writer is faced with a difficult problem in attempting to suggest that insanity may or may not be a defense for crime. There are so many angles from which one should judge the individual that it is often difficult to arrive at a satisfactory conclusion.

The medical profession, and particularly those interested in mental diseases, are trying to clear away from its vocabulary the term "insanity." We are dealing, really, with individuals, not necessarily their diseases, because the individual comes first of all, as he gives us an opportunity to study his condition as one of behavior. Mental disorders are disorders, not of the function of an organ, but of the man as a whole. The poor carpenter may be equipped with the best tools obtainable and yet will produce work that is more or less inadequate for the purpose for which it was designed. In the same way a man with healthy organs may use them so inefficiently that he cannot get along in society because he has not been trained to meet conditions, or has, perhaps, been trained in bad habits in which faulty behavior may be a psychosis. Diem found psychopathic inheritance in 78 per cent of people with psychosis and in 67 per cent of healthy individuals. Yet it is recognized now that one out of every three beds, at least, of the hospitals in the country are occupied by mental or nervous cases.

We must understand, of course, that behavioristic instincts are not infrequently due to actual disease of the brain, and the behavioristic instincts in other men or women are due to their early training and their development as an individual. Hence we come to view many forms of behavior which may or may not be cases of mental disorder. And it is very confusing, and it must be confusing particularly to lawyers and to juries, to find that for years the medical authorities on mental disturbance have used a classification which is now obsolete. In some instances there were forty-five to forty-eight different types of mental disorders recognized, and now we recognize four or five types. Unless you recognize the viewpoint that the individual is important and the disease secondary you will find yourself very much confused. One finds, too, that the study of the individual child and the formation of his habits, his conduct, and his mechanism, are just as important in deciding about his condition when he is a grown man. There are certain primitive or instinctive forms of behavior which may have been more or less instinctive types of reaction, originally unconscious, those of a more recent biologic origin in which intelligence or brain activity consciousness plays a dominant rôle. Necessarily the primitive behavior is the behavior chosen without the use of intelligence. In the struggle for existence and reproduction some reactions are of more fundamental importance than others, hence they have been provided for in the earliest stages of evolution. To survive at all it is essential that the organism secure, digest, and distribute nutrient material, posses means for oxidation and excretion, and avoid danger, etc. Some of these patterns were standardized long before the development of the brain was completed. They occur automatically or unconsciously and are known as reflexes, or instinctive behavior. You will remember from this that a child should be trained early and properly so that the impressions which he receives in early life shall continue through life. If the child is allowed to have his own way because he cries or fusses he is liable to establish the habit of reacting in this way whenever he wants something, though he may exchange tears for something more effective, illness or delinquency, when he grows up.

Most of us are dreamers, more or less. Sometimes we are substituters, that is, we substitute one action for another because it meets our purposes at the time. Yet some of these substitutions may be helpful to society and others may be harmful.

When we speak of personality we do not always know what we mean, but a great many people pride themselves on their personality and many are attractive because of their so-called personality. That means they are in a state of mind in which they present the best "front." Consequently, there are daily variations of personality in normal people. But when they occur in the mentally disturbed or mentally diseased people they are not always easily recognized. They may constitute a complete transformation or may present a disease picture, that is, a pathology. There is always a question, too, of what outlook we may have as to the deprivation of liberty. Among the insane where the personality is substantially changed we recognize that the patient is civilly and penally irresponsible. In those mental disorders that leave intact the original personality and in the slighter mental anomalies that render it only partially different from the average type of the ordinary individual, civil and penal responsibility is retained because the patient retains the capacity to live in freedom and even to be a useful member of society. Sometimes the student of mental disorders hears nothing of the part personality plays in disease. He consequently must be taught to scan patients' lives for that abnormal sensitiveness, that emotional instability that plays no slight part in painting the disease picture. The question must not be "What is happening to the man's heart, lung, or kidneys?" but "What is this individual trying to do?"

The public knows a good deal of certain forms of insanity or at least thinks it does. It speaks of dementia precox, a precocious state of mind which occurs at various ages, generally in early adult life. Not being a definite pathological disorder, we must remember that cases of dementia precox are of various types. Some are the boastful type, which doctors speak of as cases of paranoia. Some of these patients may assume a rigid attitude of the body, and these, of course, are simple and easy to recognize. But the paranoid is often extremely clever, extremely deceptive, but in some ways, to a man who is careful in his analysis of his patients, they exhibit special characteristics that put them in a paranoid class.

Among the other well-known groups are the maniac-depressive class, and these patients alternately exhibit a depression and exaltation of mind. This is probably, together with dementia precox, one of the two most important mental disorders with which we have to deal.

Now these types and other types which we cannot discuss here are divided into practically three varieties: first, the important environmental influences and their modifiability; second, the constitutional capacity and predisposition of the patient; third, the nature and extent of the deviation resulting from attempts of environmental and self-adjustment. These belong to the study of the patient's personality. The types of mental disorders are practically four in number, and are largely physiological in nature. The first group includes the affective paranoic and paranoid, dementia precox, and psychoneurotic disorders. The second group is called the disease or poisoning form (they may be poisoned by their own secretions), causing a psychosis. This, again, is due to infections and exhaustion, and these are the types that get well, and often very promptly.

A third group is called the organic psychoses, which are due to actual anatomical changes in the nervous system and particularly in the brain, such as injuries, tumors, certain infections or conditions causing change, arterial disease, and old age. The fourth group, called constitutional inferiority, are due to constitutional, physical, intellectual, instinctive, or emotional defect (please note carefully that the word "defect" is used here), but the constitutional defect forms the most important part of this group.

Insanity is either the inability of the individual correctly to register and reproduce impressions (and conceptions based on these) in sufficient number and intensity to serve as guides to actions in harmony with the individual's age, circumstances and surroundings, and to limit himself to the registration as subjective realities of impression transmitted by the peripheral organs of sensation, or the failure to properly coordinate such impressions and to frame thereon logical conclusions and actions, these abilities and failures being in every instance considered as excluding the ordinary influences of sleep, trance, somnambulism; the common manifestations of the general neuroses, such as epilepsy, hysteria, and chorea; of febrile delirium, coma, acute intoxications, intense mental preoccupation; and the ordinary immediate effects of nervous shock and injury.

With these few examples before us of the diversity of definition attained by careful students of psychiatry, we may well content ourselves and acknowledge that a satisfactory definition in brief form is scarcely to be devised. This has often been qualified by offering the following, which at least has the merit of brevity, if not of perfect adequacy:

"Insanity is a manifestation in language or conduct of disease or defect of the brain."

The law assumes to offer certain definitions of insanity, from which, however, those of medicine would tend to differ, in connection with the three chief points where law and psychiatric medicine meet:

1. A criminal is insane if he does an act whose nature and quality he does not know, or, if knowing the nature and quality of his act, he does not know whether it is right or wrong.
2. A testator is insane if his mind, memory, or understanding is unsound.
3. In a lunacy inquisition the subject of the inquiry is insane if he is incapable of managing himself and his affairs. Such are the divergent tests of insanity in law.

"THE HOUSE OF HUMAN WELFARE"

The Forum for December published an editorial under the above title, written by Judge Ben B. Lindsay, which contains much that is not only readable but wise and sensible. It speaks particularly of the man who commits a minor crime under great stress and is punished for his misdemeanor, and it quotes the item of John Brown, who, in a moment of weakness had forged a check for a hundred dollars. He had always worked faithfully, supporting his wife and five children, and his family loved him. One reason he gave for the forgery, indeed, was that his family needed things he had never been able to afford. This, while it does not justify forgery, would seem to suggest sensible ways by which, having been required to pay back the stolen money, John Brown might become permanently convinced of the unwisdom of a second attempt to provide for his family in such a manner. It was a case where the restoration of John Brown to good citizenship could readily have been accomplished by any social agency more interested in his reputation than in taking revenge for what he had done. Naturally, John Brown came before the criminal court and was sent up to the penitentiary for five to ten years, leaving his family a ruin. Not only was he in prison but he was deprived of all right to contribute through his prison labor the support he would have been happy to render his wife and children. Naturally, the mother took some ill-paid job which would keep her away from home all the day, while her children would make shift as best they could. The children were themselves now deprived by the State of certain inalienable rights. They had no father; they faced poverty, squalor, malnutrition, and insufficient schooling. Ahead of them lay a psychic and a physical crippling. The law had created here a situation which was likely to breed one or more criminals among those five children as they grew up in poverty and want and with the stigma of a father in prison always attached to them. There is further prospect that John Brown will emerge from prison not the fairly valuable citizen he was but an embittered, broken man, a psychic cripple confirmed in the very weaknesses that induced him to make that disastrous theft.

For some years Judge Lindsay has been presiding over the destinies of many of the victims of social disorders, and not infrequently of mental disturbances. But a court of law with a real legal judge on the bench cares but little for the ills of the human race. The judge is there to inforce the law, despite all possibilities of easing the various difficulties which people run up against. Of course, this does not mean that there are not many people who cannot be restrained from crime except by the prospect of punishment, and in the ordinary course of events they meet a reformatory sentence or a light prison sentence, and in due course they are paroled. These people are not often studied as individuals, but are speedily apprehended and reasonably speedily sent through their court of justice and committed. It is quite possible and probable that many of the minor misdemeanors might be adjusted, as our welfare workers are trying to do now, by taking them in charge or at least looking after their families if they are the victims of a punishable crime; and doubtless very much good has been done by the various organizations of this type in preventing such family disasters as happened to John Brown. But the people are not sufficiently awakened to the possibilities of milder measures, and, in the next place, the condition of the country, its finances, and its legal adjustments have been such that temptation to commit a crime is only too great. Consider the number of degenerate people, perverts of various kinds, and not infrequently sexual perverts, who are treated as punishable cases when, as a matter of fact, they should be kept by the State for a while and efforts made to see what could be done for them.

We seem to hear of more capital crimes than usual, more robberies, thefts, and murders, but we are not often interested in what causes the criminal to act. He acts sometimes because he is in desperate straits. The professional criminal acts because he knows that he will not be deprived of his life, but he can be deprived of his liberty, which he does not mind so much. And the number of criminals who somehow succeed in evading the law has grown enormously large, so that something ought to be done in the way of amelioration of social conditions or of legal states. But most of us have different opinions on this subject, and we are not only ready to give an opinion but sometimes we are altogether too hasty in arriving at a conclusion. However, the suggestions of Judge Lindsay are not to be ignored. His idea, in the work of the juvenile and family court of Denver, has always been a healing idea. To quote him further: "I have learned by more than a quarter of a century of practical experience with an enormous variety of human material that this law of faith achieved by casting out of fear is universal. When you make a man believe that you can help him, you can then cast out the psychic devils within him. You cannot do it with the power and completeness with which Jesus did it, for His was supreme genius and a personality so radiant that few could resist it, but you can do it in your degree. You can be persuasive, you can be sympathetic, you can be as wise as long study and experience may chance to have made you."

So with this visionary "house of human welfare," where these delinquents can be picked up and sent away for a time to be rested, or cured of a physical or mental ailment, with good schools and teachers, and good hospitals manned by good doctors and good nurses. "Everybody knows that in these institutions the result is a mixture of good and bad; but we insist, nevertheless, on having schools and hospitals. So with the House of Human Welfare. It would be imperfect because it would be human. But I believe it offers as big an improvement on the condition of having *no* House of Human Welfare as the existence of schools and hospitals, however imperfect, offers on the condition of having no schools and hospitals."

The editor is not trying to relieve a state of society by dwelling too much on the sympathy of the people. There is too much of that already. And with the disastrous murders and horrible crimes that are being committed, the call for the investigation of the sanity of such individuals is getting altogether too prevalent. It would not hurt the country very much if occasionally some of these borderline individuals who are beasts should suddenly and precipitately be removed from the country. It is said with all feeling that these people are just as dangerous as the most dangerous criminal who is presumably sane, and it would cause a check upon the so-called psychic case if he would meet his fate as many other criminals have, because he knows that what he is doing is wrong and he should suffer the consequences—even though the blame be laid to his family. One should think there would be a great many fathers and mothers turning over in their graves, if such a thing is possible, when they learn they might have done better for their children. But give the poor misguided and unequal-to-the-task man a chance to make good under proper conditions.

BOOK NOTICES

Diseases of the Skin. By Henry H. Hazen, A.M., M.D. Professor of Dermatology in the Medical Department of Georgetown University; Professor of Dermatology in the Medical Department of Howard University; Sometime Assistant in Dermatology in the Johns Hopkins University; Member of the American Dermatological Association. Third Edition. Two Hundred Forty-Eight Illustrations, including Two Color plates. Price, $10. St. Louis, Mo. The C. V. Mosby Company, 1927.

The third edition of Hazen's excellent short book on Dermatology is at hand. It leaves little to be desired in a concise, comprehensive text. The photographs are very good and are all representative. The microscopic photographs are not so good as the actual photographs, and I trust in future editions that some of these will be changed, as, for example, the one on lupus erythematosis.

In the main, I consider this book the equal of any short text that has been written on the subject.

—H. E. Michelson, M.D.

Principles of Chemistry. An Introductory Text-Book of Inorganic, Organic and Physiological Chemistry for Nurses and Students of Home Economics and Applied Chemistry with Laboratory Experiments. Cloth, $2.50. Pp. 378 with 30 illustrations. St. Louis: C. V. Mosby Co., 1927.

This is a book written to meet the requirements of the forty-five to sixty-hour courses in chemistry for nurses, following an outline published by a committee of the National League of Nursing Education. It has been written in simple language, with some theoretical principles given in detail; and the applications of chemistry to biology, medicine, and the arts have been emphasized. A comprehensive set of laboratory experiments supplementing the theoretical work has been included.

The book is clearly printed on good paper and can be recommended highly.

—A. W. Dahlstrom, M.D.

OPHTHALMOSCOPY, RETINOSCOPY AND REFRACTION. By W. A. Fisher, M.D., F.A.C.S. Chicago, Illinois. Professor of Ophthalmology, Chicago Eye, Ear, Nose and Throat College. Etc. Etc. Second Revised and Enlarged Edition with 260 illustrations, including 48 colored plates. Philadelphia: F. A. Davis Company, Publishers, 1927.

The second edition of this book is somewhat larger than the first but still contains all the faults of the original. The author probably uses it in his teachings as an outline but there surely is no general need for this publication.

—KENNETH A. PHELPS, M.D.

APPLIED BIOCHEMISTRY. By Withrow Morse, Ph.D., Professor of Physiological Chemistry and Toxicology, Jefferson Medical College, Philadelphia, Second Edition, Revised and Reset with the cooperation of Joseph M. Looney, M.D., Assistant Professor of Physiological Chemistry, Jefferson Medical College. 988 pages with 272 illustrations. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $7.00 net.

This second edition within eighteen months is a fitting compliment to the author. As the title implies, it deals with biochemistry from a medical viewpoint. The lesson in biochemistry is emphasized by showing the application in the clinic.

This edition has been brought up to date by the inclusion of the worthwhile advances in this comprehensive science. The diagrams, illustrations, summaries, and suggestive references are all well chosen. The volume is intended for the student to bridge the gap between pure science and practice, but it would fit exceedingly well into any physician's bookshelf and should be of great value to its owner.

—A. W. DAHLSTROM, M.D.

BRONCHOSCOPY AND ESOPHAGOSCOPY. By Chevalier Jackson, M.D., Professor of Bronchoscopy and Esophagoscopy, Jefferson Medical College; Professor of Bronchoscopy and Esophagoscopy, Graduate School of Medicine, University of Pennsylvania. Second Edition, Reset. Octavo of 457 pages with 179 illustrations and 10 color plates. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $8.00 net.

This is the second edition of Jackson's book, originally an abstract of the author's larger work on Peroral Endoscopy. It is increased by one hundred pages which alone shows the remarkable advance of the subject in the past five years. It is interesting to note that more space is devoted to the diseases of the larynx, bronchi and esophagus, than to foreign bodies. A large amount of space is naturally devoted to the technique of bronchoscopy and to the surgery of the larynx, particulary, tracheotomy, and laryngostomy.

The author states "Clear presentation of basic things requires a dogmatic form of statement." Some may not agree that all his dogmatic statements are of "basic things"—for example on page 76, "Indirect mirror laryngoscopy should be part of the routine examination of every patient admitted to any department of any hospital" also "Bronchoscopic insufflation of oxygen should be taught to every interne in every hospital" and "Every ailing child should have a roentgen ray examination to exclude foreign bodies. The day may come when every apparently well child will be thus examined in order to discover cases of foreign bodies during the symptomless intervals."

Certain other conclusions based on the author's tremendous experience would not be universally accepted—as on page 81, he states "the esophagus is without sensation as anyone may observe in drinking hot liquids" and "In cases of paralysis of the larynx general anesthesis must always be given intratracheally and if the proper apparatus for this is not available a tracheotomy must be done. Therefore examine the larynx of every patient before anesthesia in goiter cases." The reviewer doubts if goiter surgeons have their patient's larynx examined with the idea of deciding whether to give the anesthetic through a tracheotomy tube or not. Also on page 47, "The dilation of cicatrical stenosis of the esophagus can be done safely only by endoscopic or retrograde methods. Even when a perforate ended dilator is pushed down over a swallowed string guide, fatal splitting or perforation of the esophagus is inevitable in a certain per cent of cases." No mention is made of early treatment of such cases to prevent the stricture from forming.

Tracheotomy is still recommended for the postbronchoscopic subglottic edema, giving the reason that intubation is not so safe. No mention is made of any proof of this statement. Possibly if intubation were first tried in these cases many tracheotomies could be avoided.

The chapters on the technic of bronchoscopy and the removal of foreign bodies are presented in a masterful manner, as only Jackson could do. No one else in the world has had an experience of 1,800 such cases.

The chapters on the diseases of the bronchi and esophagus are excellent. Stress is properly laid on the value of direct laryngoscopy in children—three cases of paralysis of the recurrent nerve from birth injuries in the new-born are reported.

Malignant diseases of the larynx give 85 per cent cure when laryngofissure is done for a small growth in anterior two-thirds of intrinsic area. In all cases in which the diagnosis is not clear a specimen is taken. Bronchoscopy is the only means of diagnosing malignancy of the lung. Probably lobectomy would be the cure in such a case if seen early.

Throughout the book are frequent typographical errors, such as references to wrong figures or illustrations, as on page 166 the reference to figure 69 should be 80, and the word "invaded" should read "univaded." Also on page 107 the reference to forceps should be figure 18 and not figure 7. On page 81 the statement is made "chloroform should not be used" and in the next paragraph "ether or chloroform may be started in the usual way."

The chapter on bronchoscopic oxygen insufflation is not written in the usual clear style of Chevalier Jackson; in fact, it is rather confusing for a new chapter in the book.

In spite of these minor defects the book remains the best thing of its sort in print and will be of great value to all students and teachers of bronchoscopy and esophagoscopy.

—K. A. PHELPS, M.D.

NEWS ITEMS

Dr. Theo. J. Catlin has moved from Buffalo, Minn., to Cloquet, Minn.

Dr. Melville Sanderson has moved from Minneota, Minn., to Russell, Minn.

The first unit of the new St. Andrews Hospital, of Minneapolis, was dedicated last month.

The physicians of Butte, Mont., will publish a series of health articles in the newspapers of that city.

Dr. A. J. Courshon, of Norfolk, S. D., and Miss Kathleen Morgan, of Chadron, Neb., were married last month.

Dr. John A. Thabes, Jr., son of Dr. John A. Thabes, of Brainerd, has become a member of the Brainerd Clinic.

Dr. C. E. Proshek, of Minneapolis, has been decorated by the King of Serbia for his medical services in the World War.

Dr. J. L. Benepe, of St. Paul, has located at Dent, Minn. Dr. Benepe has been connected with Ancker Hospital for the past year or so.

The number of cases of diphtheria in Minnesota, in 1927, was over 1,000 less than 1925 or 1926. A gratifying decrease in other contagious diseases was also shown.

Dr. H. F. Bayard, of Stewartville, has become a Fellow of the Mayo Clinic. Dr. G. L. Joyce, a recent graduate of Loyola, takes up Dr. Bayard's work at Stewartville.

The State Board of Health of Montana reports that 1927 was the healthiest year in the history of the State. The infant mortality rate was also the lowest ever experienced in Montana.

The new 20-bed hospital built at Fosston by Drs. Turnbull and Shedlov and opened in November was promised splendid support from that community. The new building cost about $20,000.

Dr. A. C. Strachauer, of Minneapolis, is to give the address in Surgery before the Nebraska Division of the American College of Surgeons at Omaha, on February 7. His subject will be "Cancer."

Dr. Harold S. Diehl, Director of the Student Health Service of the University of Minnesota, was re-elected president of American Students Health Association at its annual meeting in New York last month.

Dr. Claude Watkins, of Sidney, Mont., was married last month to Miss Helen Hunt, daughter of Dr. and Mrs. John H. Hunt, of Glendive, Mont. Mrs. Watkins was a graduate of the University of Minnesota.

Dr. William M. Empie has moved from Virginia, Minn., to Fullerton, Calif. Dr. Empie was a prominent physician in Virginia for fifteen years, being school physician for some years and mayor of the city for three terms.

Dr. Norman S. Heine, who formerly practiced at Phillipsburg, Montana, died last month at Medford, Oregon, at the age of 65. Dr. Heine was a graduate of the Minnesota Hospital College of Minneapolis, class of '88.

Many annual hospital reports coming to this office show a gratifying financial condition, in the community and in public and private hospitals of the Northwest due, probably, to improved management and increased patronage.

The question of locating the Minneapolis General Hospital on the Campus of the University seems to have been settled against the project, even though it means the loss of over a million dollars offered for the General Education Board.

Dr. A. N. Bessesen, Sr., and his two sons, Dr. Alfred N., Jr., and Dr. Daniel H., have established the Bessesen Clinic at No. 5 West Lake St., Minneapolis. The father is a graduate of Rush, and the two sons are graduates of Minnesota.

Dr. O. H. Warner, of Brookings, S. D., has gone to Leland Stanford University to take a postgraduate course in surgery of the head and neck, and he will also visit other clinics of the Coast. Dr. Warner is a University of Minnesota man.

Dr. Charles E. Smith, a pioneer physician of St. Paul, who retired from practice some years ago, died on January 11, at the age of 85. He was a graduate of the University of Pennsylvania, class of '65, and at once came to St. Paul, where he remained in practice until his retirement.

The secretaries of the county and district medical societies of Minnesota held a meeting in St. Paul last month. Dr. J. F. D. Cook, Secretary of the South Dakota Association, and Dr. J. G. Lamont, Secretary of the North Dakota Association, were invited guests of the Minnesota Association.

An investigation of the management of the State Hospital for the Insane at Warm Springs, Montana, was recently called for and made by a committee appointed by the Governor. A report by the committee highly commended Dr. H. A. Bolton (Superintendent) and the Staff of the Hospital.

At the annual meeting of the Hennepin County Tuberculosis Association last month, Dr. R. G. Leland, of the Bureau of Health and Public Instruction of the A. M. A., gave the principal address. Dr. N. O. Pearce, of Minneapolis, was elected president, and Dr. F. H. Hacken, of Minneapolis, was elected vice-president for 1928.

A regional public health association for Wisconsin, Minnesota, and North and South Dakota was organized in St. Paul last month. Dr. W. F. Braasch, of Rochester, was elected president, and Dr. George Crownhart, of Milwaukee, was elected secretary. A committee was appointed to draw up a plan for the work of the society to report in June.

An additional announcement of the Northwestern Conference for Child Health and Parent Education to be held in St. Paul, on March 27, 28, and 29, appears on another page. This Conference is sponsored by one hundred and twenty clubs and other organizations in the State and the Twin Cities. It will be a notable gathering in the Northwest, in fact in the country.

Dr. Herman G. Franzen, of Minneapolis, died on January 16, at the age of 55. Dr. Franzen was a graduate of the Northwestern Medical College, class of '05, had studied abroad, and was a member of the surgical staff of Asbury Hospital. He was a member of prominent social clubs and medical societies. He had practiced in Minneapolis nearly a quarter of a century.

Dr. Robert O. Earl was re-elected president of the Board of Directors of the Northwestern Baptist Hospital Association at St. Paul last month, and Dr. George A. Earl was re-elected president of the Association. The new Midway Hospital, erected a year ago, was reported filled to capacity, and plans are under way to increase the capacity of the building to 250 beds and for a nurses' home to accommodate 200 nurses.

The Neuropsychiatric Hospital of the Northwest, the proposed new hospital for the care of nervous and mental patients, is being planned to provide for a long-felt need in Minneapolis and the Northwest. It will be modern in every detail and equipped with everything essential to the welfare and comfort of the patient. This is not intended to be a privately owned hospital but rather will be a hospital devoted to the special field of neuropsychiatry, governed by a board of directors composed chiefly of business men familiar with business methods, and supervised and directed in its work by medical men having not only a professional but a financial interest in the undertaking. Further announcement will be made as development of the present plans is consummated. At present it is sufficient to say that such a hospital is greatly needed in the Northwest, and it is to be hoped that the venture will have the support of all medical men not only in its inception but in its completion and future.

Annual Meeting of the Sioux Falls (S. D.) District Medical Society

Dr. J. B. Gregg, Sioux Falls, was elected president of the Seventh District Medical Society for the coming year at the annual meeting and election of officers held at the Carpenter Hotel. Dr. Gregg, who served as vice-president during the last year, succeeds Dr. L. J. Parke, of Canton.

Other officers of the Society elected were Dr. A. S. Rider, Flandreau, vice-president; Dr. L. J. Pankow, Sioux Falls, re-elected secretary-treasurer; and Dr. L. L. Parke re-elected delegate to the state convention, which will be held in Hot Springs.

About thirty members of the Society attended the banquet and meeting. T. M. Bailey, local attorney, addressed the group on "The Business Side of the Practice of Medicine and Surgery." At the conclusion of his talk an open discussion was held during which questions were asked by the members.

Dr. S. M. Hohf, of Yankton, President of the State Association, spoke of the various questions confronting the medical profession. An open forum discussion also was held at the conclusion of his address. Reports of the officers were given.

The Aberdeen District Medical Society of South Dakota

Forty-six members and guests were present at the annual banquet of the Aberdeen District Medical Society held at the Aberdeen Chamber of Commerce, Tuesday evening, January 17, 1928. Orchestral and vocal selections were enjoyed during the banquet after which the following program was presented:

1. "Clinics in Vienna." Dr. R. D. Alway, Aberdeen, S. D.
2. "The Etiology, Clinical Recognition, and Management of Various Types of Tachycardias." Dr. S. Marx White, Minneapolis, Minn.
3. "The Diagnosis of Surgical Lesions of the Kidney and Ureter." Dr. F. J. Tobin, Aberdeen, S. D.
4. Presidential Address—"The District Medical Society." Dr. W. A. Bates, Aberdeen, S. D.

After the annual report of the Secretary-Treasurer the following officers were elected: President, Dr. J. E. Dunn, Groton, S. D.; vice-president, Dr. R. D. Wilson, Aberdeen, S. D.; secretary-treasurer, Dr. R. G. Mayer, (re-elected), Aberdeen S. D.; censor, Dr. M. C. Johnston, Aberdeen, S. D.; Drs. F. Kraushaar and J. F. Adams, Aberdeen, S. D., holding over; delegate, Dr. W. A. Bates, Aberdeen, S. D.; Dr. E. A. Pittenger, Aberdeen, S. D.; and Dr. E. W. Whitcomb, Cresbard, S. D., holding over; alternate delegates, Dr. W. D. Farrell, Aberdeen, S. D.; Dr. J. D. Alway, Aberdeen. S. D., and Dr. F. M. Crain, Redfield, S. D., holding over.

R. G. Mayer, M.D.
Sec.-Treas.

Instrument Wanted

I want to purchase a second-hand eye-testing set. Small size preferred. Address 451, care of this office.

Coolidge X-Ray Tube for Sale

A slightly used Coolidge X-Ray Tube of medium focus is offered for $80.00. Address 435, care of this office.

Substitute Work Wanted

By an experienced physician graduate of a high-grade medical school and licensed in Minnesota. Address 433, care of this office.

Work or Position Wanted

I am a Minnesota graduate, class of '26, and desire a location, locum tenens work, association, or surgical opening. Address 438, care of this office.

Location Desired

By a graduate of a Class A school with several years experience. Desire location in a town with an open hospital. Address 453, care of this office.

Microscope for Sale

An almost new Leitz scope in perfect order is offered at a bargain. Has two eye pieces and three objectives, including an oil-immersion. Address 449, care of this office.

Office Position Wanted

By a young woman with over two years training as nurse; some stenography; and good recommendations from hospital. Moderate wages. Address 441, care of this office.

Morse Wave Generator for Sale

In use four years but very little used. In perfect working order. Dynelectron, Model D, made by Liebel-Flarsheim Co. In use three years. In perfect condition. Address 444, care of this office.

Practice for Sale

In southwestern part of Minnesota, a beautiful modern home, which cost $25,000 to build, a good practice in a large territory, office furniture and fixtures, many life insurance examinations; a Willys-Knight car. Good will and one month's introduction for the sum of $16,000. A gold mine for a Dane, not much less so for a Scandinavian or German. Reasons for leaving—poor health. Address 443, care of this office.

Practice for Sale in North Dakota

A $14,000 cash general practice is offered for price of office equipment. Hospital. Will stay six months or longer to introduce successor. Splendid field for young able physician and surgeon. Address 452, care of this office.

Office Position in Minneapolis Wanted

By a woman of large experience in physicians' office. A high-grade stenographer and expert in history-taking, capable of managing a large clinic or a specialist's work. Satisfactory references given. Address 434, care of this office.

Practice for Sale

A good practice and complete equipment in a county-seat town in Central Minnesota; population 2,000. Rich farming community; several churches and best of schools. Reason for selling, am going to specialize. Address 439, care of this office.

Practice in South Dakota for Sale

A seven-thousand dollar practice in South Central part of South Dakota is offered for sale. Hospital accommodations. This offers a good opportunity for a live physician and surgeon. Address 445, care of this office.

Office Position Wanted

By a graduate of the Commercial Department of a District High School with several years experience as legal and medical stenographer, the latter engagement being with a well-known firm of physicians. Can also keep books and take care of office. Address 440, care of this office.

Fine Practice in North Dakota for Sale

Practice and equipment for less than price of equipment. Best and only available office. Fischer H. F. machine which cost $725 included. Wonderful chance to get an established practice. Income from start. City of 2,000 and R. R. division point. For quick sale One Thousand Dollars takes it. Address 450, care of this office.

Good Paying Minnesota Practice for Sale

A contract and unopposed private practice in Northern Minnesota for sale. Practice nets $500 a month as books and bank account will show, less than $100 of last year's bills unpaid. All services are practically cash or guaranteed. A splendid opening for a young or middle-aged man. Best of reason for selling. Address 446, care of this office.

Apparatus for Sale

All in perfect condition, good as new. One Hanovia Alpine Lamp; one Castle Electric Sterilizer (choice of small instrument sterilizer); one Brown-Buerger catheterizing and operating cystoscope with concave and convex sheaths (Wappler make) with current controller and irrigating stand; one instrument and dressing stand, glass and white enamel. Address 432, care of this office.

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THE PREVENTION OF ACUTE CONTAGIOUS DISEASES IN CHILDREN*

By F. C. Rodda, M.D.
Associate Professor of Pediatrics, University of Minnesota
MINNEAPOLIS, MINNESOTA

Doctors are intensely interested in preventive work. They are also intrigued by methods which are new. Perhaps in search for up-to-date things, oftentimes some old, tried procedures are neglected. This is true with respect to vaccination against smallpox. The incidence and mortality of the acute contagious diseases is greatest in the first years of life. If we are to have prevention that is worth while it must be started early in life. Unfortunately, that is not the attitude of the profession in regard to smallpox. In your state in 1914 you had nearly 2,000 cases of smallpox with many deaths. That means that someone was negligent. Probably now most of the people in North Dakota have been vaccinated because of the scare of 1924, but all the while other children are coming along to provide material for another epidemic. We are attempting to vaccinate every child at about six months of age. At this age the reaction is very slight and the child is protected during the time it is most in danger.

We now know from the work that is being done by the United States Public Health Service, that the protection by vaccination is complete only for five or six years, perhaps less. With re-vaccination at five to six years, that is school age, one of the three reactions may be obtained. First: There may be an "immunity reaction," a slight elevation and redness occurring on the second day which passes off without any scarring. Second: There may be a similar reaction which occurs between the third and seventh days, the so-called "vaccinoid reaction," which means that the individual has a mild degree of susceptibility. Third: There may be a typical vaccination.

We feel that if every infant were vaccinated, unless there is some definite contra-indication, such as eczema, at six months of age, and that if this is repeated at the time the child enters school, protection against smallpox would be complete, at least until the age of puberty.

The second preventable disease is diphtheria. Unfortunately, not enough is being done in the prevention of this disease in rural communities. I shall not spend time telling you about the Schick test and its development, but will state that when properly performed the test is reliable. Parke states that he has never known a patient with a negative Schick to develop diphtheria. It is to be assumed that potent material is injected into the skin in a manner to produce a wheal and the test carefully read on the fifth day. As a result of scores of thousands of Schick tests, we have some facts relative to the incidence of diphtheria. At one year of age practically all individuals are susceptible to diphtheria. In late childhood about one-half are susceptible, and in adult life about 10 to 15 per cent are susceptible. If we are going to prevent diphtheria we should do it early in life. We have made it a practice to give infants at one year of age three doses of toxin-antitoxin and to do a careful Schick test six months later. What results have we had and what have we learned? This might best be stated in the form of a series of questions. First, What of the reactions from the inoculations? Those of you who used the toxin-antitoxin mixture when first introduced became discouraged because of the profound reactions. Some children were made violently ill. We now use one thirtieth the dose we formerly used, and the reactions are practically *nil.* Some deaths were reported from Dallas, Boston, and Munich, which, however, followed the use of improperly neutralized toxin or material which had been frozen. With the present smaller dosage and governmental control of the product, such results need not be feared. We would say this, however, that vaccines, toxins or sera, should not be carried around in grips. They deteriorate very rapidly with varying temperatures and must be kept under ideal conditions.

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*Informal address before the North Dakota State Medical Association, June 2, 1927.

Second, When is immunity acquired? It is gradually built up and reaches its maximum at the end of six months.

Third, Are all these children receiving three inoculations immunized? No. We find about 10 to 14 per cent will show a positive Schick when they are tested after six months. They are still susceptible to diphtheria, and therein lies very great danger if the test is omitted. If they present a positive test at the end of six months we repeat the inoculations. We have found a negative Schick six months later in all our cases save in one child.

Fourth, Is there a negative phase? Is there a time after the inoculations when an individual is more susceptible? There may be. We take the precaution of never giving the toxin-antitoxin to a child who has recently been exposed to diphtheria.

Fifth, Is there any danger in giving toxin-antitoxin and sensitizing the child against horse serum so that you will be handicapped in giving other sera later? Theoretically there may be. Stewart of Minneapolis has reported such results. On the other hand, Parke of New York has found but little evidence of such sensitization. I think there may be some element of danger, but if one is careful in the work and is prepared to desensitize the patient and give adrenalin, there will be no serious results.

Sixth, Should a child who has had diphtheria be immunized? Statistics show that an attack of diphtheria confers immunity in only about 50 per cent of the cases. Therefore, such patients should be immunized if the Schick test is positive. However, such patients as have had antitoxin should not be tested until four to six weeks after administration of antitoxin for the reason that enough injected antitoxin may be present in the body to nullify the test.

Seventh, What shall we do in case a child with a negative Schick test has a positive diphtheria throat culture? Isolate, make a virulence test. and, if there are signs of clinical diphtheria, give a therapeutic dose or antitoxin. Most likely the patient will not acquire clinical diphtheria. He should be treated as an ordinary carrier.

Eighth, What is the procedure in older children? Since practically all children are susceptible at one year of age, the preliminary Schick test is omitted. On the other hand the majority of children, ten to fifteen years of age, are immune. Therefore, the Schick test should be employed preliminary to immunization.

Ninth, How long does immunity last? We do not know since our time experience is limited. Parke has found the Schick tests remaining negative after eight or nine years in 90 per cent of his cases. Perhaps in the majority of cases it lasts for life. At least the immunity carries the child through early school age when the mortality from diphtheria is highest.

Tenth, What of the new agents for immunizing which contain no antitoxin, hence no horse serum, which is the sensitizing agent? In Ramon's preparation the toxin is neutralized with formaldehyde. Larson neutralizes the toxin with oleum ricinate (castor oil soap). It is to be hoped that these products may be as efficient as the toxin-antitoxin mixture, but as yet such has not been proved. Personally, we will leave this issue with men of enormous experience, such as Parke, and continue to use the old method, which has been efficient in our hands, until the new has been proved equal or better.

Eleventh, Is the talk of preventing diphtheria "bunk" or fact? It takes time and broad experience to determine. Reliable statistics are just beginning to appear. Most convincing is Seer's report of Auburn, N. Y. A city of a mixed population of 37,000 in 1920 had a diphtheria death rate of 48.3 per 100,000. Immunization was begun in 1922 and had reached 85 per cent of all the children in 1924. Since that date, two and one-half years, there has not been a single death from diphtheria. Parke states toxin-antitoxin has reduced the diphtheria death rate in New York City from 23 per 100,000 in 1911 to 8 in 1925. The slogan of the Metropolitan Life Insurance Company is "No diphtheria after 1930."

It may be accepted that the prevention of smallpox and diphtheria is well founded, but in the prevention of pertussis, measles, and scarlet fever we are still in the experimental stage.

In 1906 Bordet and Gengou isolated the bacillus of pertussis. Their findings were further confirmed by Mallory in his pathological studies of whooping cough in 1912. Since then there has been much discussion as to whether the bacillus in question is the actual cause of pertussis. Smith at Washington, this year, reported the finding of the Bordet-Gengou organisms in pure culture in five children dying of pneumonia in early stages of pertussis. It would appear safe to assume that the cause of pertussis is the Bordet-Gengou bacillus.

In 1915 the New York City health department prepared a vaccine of pure Bordet-Gengou organisms. We have used this vaccine ever since, we think, with good results. Therapeutically we feel that it decreases the severity and duration of the disease. For prevention it is of value under ideal conditions, that is if administered early. One should not expect results if the vaccine is given many days subsequent to the exposure. Naturally the greatest problem is the prompt information as to exposure. We must further remember that any immunity conferred by the vaccine is probably of short duration. Its greatest value is in the protection of the infant, sickly or convalescent child for a limited time.

Work toward the prevention of measles is very active and enlightening, but as yet, inconclusive. Hermann in 1915 swabbed the nostrils of young infants with nasal washings from patients acutely ill with measles, thereby producing an attenuated attack of the disease which conferred immunity. The method, however interesting, is not a practical one. Later it was shown that 5 to 10 c.c. of serum collected from a patient convalescent from measles and injected into a non-immune on the first or second day after exposure, would protect against the disease for two to six weeks in the majority of cases; if injected after the third day an attenuated attack was produced supposedly conferring permanent immunity. The problem here is to obtain serum from suitable donors at the proper time, coupled with the knowledge of the exact hour at which the suspected patient was exposed. There is also danger of transmitting lues and tuberculosis. Obviously the method can never come into general use. Recently, however, Bivings and Dickson report gratifying results in using larger amounts of serum obtained from parents who have had the disease earlier in life. With prevention it must be recalled that the immunity is purely passive and lasts only from two to six weeks. While of value in the home and in infant institutions in protecting the feeble or convalescent child, it is not a method of protection for the rank and file in the sweeping epidemics which occur every few years.

Animal sera have also been tried. Tunnicliff has isolated a green, pus-producing diplococcus from measles patients and with it has produced a goat serum which she claims is specific. Ferry and Fisher report similar results with their so-called streptococcus (viridans) Morbilli. Caronia in Italy claims the cause of measles is an ovoid coccus, while Degkwitz insists the cause of measles is a filtrable virus, and the above described organisms are accompanying growths or at most existing in symbiosis. So the matter stands at present. In any event these sera, if specific, produce a passive immunity good only for a few weeks, and profound serum reaction may follow their use. Such sera should be used with an open mind, the results carefully controlled and tabulated, so that their worth may be established or disproved.

The status of scarlet fever prevention is at present in a state of unhappy confusion. You are all acquainted with the work of the Dicks in isolating the streptococcus scarlatinæ, obtaining its toxin, perfecting the Dick test (which is very similiar in technic to the Schick test) and by injecting the toxin into horses, producing a potent scarlet fever antitoxin. The Dochez antitoxin differs in that toxin plus the organism is used as an antigen. The report of the Scarlet Fever Committee, confirming the findings stated above, led to a wave of optimism. The scarlet fever problem was solved? Simply perform the Dick test on all children; if the outcome of the test was negative that individual was immune; if positive, give a certain number of injections of the toxin and immunity would result. If, perchance any untested individual acquired the dreaded disease one dose of the antitoxin would afford a speedy, uncomplicated recovery. But experience did not justify the optimism. What were some of the difficulties and how explained? First, Certain patients with negative Dick tests later acquired scarlet fever; perhaps this was a matter of potency and strength of the test material used. Second, In certain individuals a positive Dick test could not be converted to a negative one, perhaps not enough toxin was given. Third, After a negative Dick was obtained certain individuals acquired scarlet fever, which is hard to explain without further investigations. Fourth, With the orginal Dick toxin we encountered very severe reaction headache, nausea, fever, sore throat, and a scarlatiniform rash. Parents refused to submit their children to further "shots" and so advised their friends. To us, however, this was very instructive. It spoke for the specificity of the toxin. It produced a picture of mild scarlet fever. This was similar to the results Gabritschewsky obtained by the use of a streptococcus vaccine prepared from throat cultures of patients suffering from scarlet fever. Perhaps these unpleasant reactions might have been mitigated by using smaller graduated doses and more of them. We next employed the Larson toxin, modified by castor oil soap, in amount comprising 1,000 skin test doses. It is true, reactions were very infrequent and mild, but Dick tests did not become negative, and numerous individuals subsequently contracted scarlet fever. However, there is a marked discrepancy in dosage. Whereas, Dick orginally recommended 41,500 units and of late recommends 95,500 units. We used 3,000 to 5,000 with the Larson preparation.

The problem is further obscured by evidence that one may have scarlet fever without rash. This is a very old clinical observation. For instance, a nurse caring for a scarlet fever patient may present all the symptoms and complications of the disease, save the rash, and a third party may acquire from her scarlet fever with a rash. There are apparently bacterial as well as toxic components in the disease. The present mode of attack is against the toxic element, the most striking sign of which is the rash. A desideratum remains, a bactericidal agent. Further studies include a standardization of an optimum amount of toxin for the Dick test, the size of the immunizing dose, and some method of avoiding severe reactions.

From our experience we feel that in using scarlet fever toxin, we are dealing with some specific agent involved in scarlet fever. There is much evidence to prove that injections of scarlet toxin confer some immunity. How complete the immunity is and how long it lasts is problematic. We try to explain our attitude to our and give no assurance or guarantee as to results.

DISCUSSION

Dr. Edward C. Haagensen (Grand Forks, N. D.): I would like to ask one question. Dr. Rodda made the statement that the public will do anything to prevent disease, and that the public is intensely interested in prevention. I doubt that statement very much. With the little experience I have had here in Grand Forks with the intention of the public I should say it was to avoid the prevention. At the present time and during the past two or three months we have had more scarlet fever than usual here in Grand Forks, and most of the men have used the Dick serum and worked along that line. I have gone to people who were quarantined, and they were much interested in the serum. The physician attending the patient had told them that it might prevent complications and so forth, as Dr. Rodda said, not guaranteeing anything, but saying that it was the best thing we had. In two or three days those people have called up and said that they had been told that the child would surely die if they used the serum. How are we going to get this across to the public, that they should vaccinate their children, which is all-important? We talk about it at the County and State and National meetings, but how can the public be made to realize the necessity of the work. I think they are not interested until they have a case in their own household. I think the medical profession should try to get it across and have the vaccinations complete, and I think if it could be made compulsory to have a general physical examination of the children at school age that this would be of great value.

Dr. Arne O. Arneson (McVille, N. D.): I think in about 1917 I saw a patient with Dr. Bennett, and we had an experience that I should not like to see repeated. There were a great many cases in our vicinity, and while we did not take care of all of them we saw a good many and we thought the disease was a mixture of scarlet fever and measles. The mortality was very high. Ever since then whenever scarlet fever and measles have been running together in a community, such as occurred in my locality last winter, I have been much alarmed for fear we should get a combination of the two.

Dr. W. C. Nolte (Jamestown, N. D.): A campaign for the immunization of our school children was put on in Jamestown through the efforts of the city nurse. The doctors all got together and are doing the work for almost nothing, giving the immunization without the use of the Schick test. Our children average about fourteen years of age, and I understand, from Dr. Rodda's paper, that half of those children would not need to be immunized if the Schick test were used first. Might we cause any complication by immunizing children that would give a negative Schick test?

Dr. Kent E. Darrow (Fargo, N. D.): To give you an idea of the response that people will give to immunization, the Cass County Medical Society decided that it would be all right for the Public Health Department to immunize all school children free of charge with the following results:

Dr. Kilbourn advertised that he would do this at the various buildings and went over all the school children. They had been Schicked the year before. Forty per cent of the children responded for immunization. The immune school children in Fargo now, with those who were already immune and those who have gone to their individual doctors, I think will run pretty close to 50 per cent. We felt that the immunization work was so important that we were perfectly willing to have these individuals vaccinated free of charge. I think they are doing the same thing in Jamestown. Some schools run a little over 40 per cent and some a little lower. This is the average.

Dr. A. H. Nerad (Argyle, Minn.): I wish to ask Dr. Rodda if we can get complete results with the scarlet fever antitoxin after the fever develops. I have tried it on a small number of cases and have had a good result in every case in which it was used during the first few days of the disease.

Dr. Charles E. Bennett (Aneta, N. D.): I wish to confirm Dr. Arneson's remarks about the combination of measles and scarlet fever. When these diseases were present at the same time there was a mortality of 50 per cent. In the same household some members had measles only and others had scarlet fever and some both. I have run across only one instance where this has happened before in the United States, but I can assure you it was a pretty serious matter.

Dr. Rodda mentioned only one kind of scarlet fever serum, but the proprietary houses are putting out two kinds, and both have about the same degree of effect. They will cause the rash to disappear, but neither of them seems to be of any particular service in preventing complications. The cervical, kidney, and other complications persist just as before their use.

PRESIDENTIAL ADDRESS BEFORE THE HENNEPIN COUNTY MEDICAL SOCIETY*

By Stanley R. Maxeiner, M.D.
MINNEAPOLIS, MINNESOTA

Members of Hennepin County Medical Society:

According to the by-laws of our Society, the final duty of the President is to present an address on some professional or scientific subject at the annual meeting. Custom has decreed, however, that instead of the scientific subject, the retiring President shall present his ideas on certain professional subjects. These may be subjects demanding national attention or subjects of a purely local nature, often based on his experiences during the past year, and custom seems also to have decreed that the retiring President should offer such constructive criticism and ideas as may be helpful in building up the future policy of the Society. It has been with considerable hesitation, and I also assure you with a great deal of thought, that I have approached this address.

First of all I wish to thank you for the honor you bestowed when you elected me to the presidency of your Society. I wish to thank all who have assisted me in my efforts to make this year a success. I wish to thank the chairman, together with the other members of the various committees, for their efficient and untiring work, for I realize that what success the Society has had during the past year is due to their co-operation. I wish also to thank Dr. E. T. Bell and his colleagues from the University for the pathological conferences which have been added to our Wednesday programs and which, undoubtedly, are responsible for a considerable increase in attendance. I wish, in addition, to thank those who have taken part in the programs of the Society.

Many members look to the American Medical Association and the State Association for the accomplishment of their plans, when, in reality, they should look nearer home. The State or the National Association can only reflect the attitude of its component units which are the county or district societies. In fact the component units must determine the actions of the larger groups. The county society in turn must reflect the attitude of its members who are its component units. The greatest asset of any county society is its active members, while its greatest liability is its inactive members. No member can ever reap the full benefit of any society, nor can he receive the maximum of inspiration, unless he takes an active part in its proceedings.

Probably the greatest piece of work done, during the past year, by any single committee of this Society, was the survey of the Minneapolis General Hospital. The entire report of this committee has been on file in the library and the summary of the committee was read before you and received your almost unanimous approval. What will be accomplished by this report is yet to be seen. That part of it which has to deal with a proposed plan for the more careful investigation of the financial standing of patients admitted to the hospital should be kept alive regardless of what happens to the rest of the report. I believe that with adequate facilities for this investigation, those who are able to pay would go to private hospitals where they belong. I also feel that if those admitted to the hospital on the part-pay plan are compelled through an efficient collection department to pay their proportionate rate and it became generally known that patients so admitted would be entirely unable to escape this payment, in many instances they would secure an additional amount sufficient to permit them to go to private hospitals.

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*Presented at the annual meeting of the Society, Minneapolis, January 9, 1928.

The present high cost of being sick and the position of the man of moderate means in time of sickness are at present demanding a great deal of attention. Dr. Fishbein of the American Medical Association discussed these problems at length before the National Hospital Conference. Dr. Washburn, Superintendent of the Massachusetts General Hospital, in addressing the Professional Man's Club of Minneapolis, called attention to the dread of sickness by the man of moderate means. The poor have exceptional facilities in the large charity hospitals. The rich are well able to pay for their needs, but the man of the middle class who cannot get into a charity hospital and who can scarcely stand the expense of laboratory examinations and specialist's fees, is in need of serious consideration. A $2,000,000 hospital, recently endowed, is to be constructed on the grounds of the Massachusetts General Hospital to provide for this group. It is hoped that the income at moderate prices will be sufficient to bear the overhead of this new hospital. Dr. Washburn states that the present private patient pays on the average of $11.00 a day, and that prices run from $7 to $18 a day. Under the new scheme the prices will be reduced to from $4 to $6 a day for the same service. The great reduction in the rate will bring the prices in Boston down to approximately what all private patients in Minneapolis are required to pay at the present time. Although the situation in Boston is scarcely comparable with the situation in Minneapolis nevertheless the question is demanding National attention at the present time, and it would seem wise for our Society and the hospitals of Minneapolis to be alert to what is going on and to be prepared to solve this problem when it directly confronts this community.

I have reviewed a large number of the Presidential addresses given before various county, state, and national societies throughout the United States, and it has been interesting to note that one of the predominating subjects in the majority of the recent addresses has been "Public Education Along Medical Lines." Different methods have been used throughout the country in the furthering of this effort. Perhaps the most far-reaching agent is the press. But even this cannot be fully utilized when our profession refuses to take part in the dispensing of reliable information and, in the eyes of the public, maintains an attitude of secrecy. Carmichael, before the Kansas City Medical Society, stated: "The greatest problem confronting the medical profession to-day is the problem of public education along medical lines. This problem is such as may be met and solved only by a full co-operation between the public and the medical profession. The lack of this co-operation on the part of the public is due in part to the lack of understanding of the nature and origin of the diseases that afflict them, in part to peculiar faiths in which health and religion are closely allied, in part to the propaganda of the so-called drugless healers and nostrum venders and in part to the indifference and sometimes, unfortunately, the incompetence of members of the regular profession. The followers of the regular profession are, in the main, idealists, and at all times their thoughts and efforts have been directed toward the scientific advancement of medicine, the results of which are shown in its unparalleled achievment in the past fifty years." He further states that as an organization for public enlightenment the society has failed utterly, and, as an agency for the dissemination of facts concerning the orgin and rational treatment of disease whereby the public might be fully enlightened, its efforts have been desultory and lacking in continuity. A similar thought is conveyed by the following quotation from the *Saturday Evening Post* under the title, "Good News Suppressed." "The tragedy of medicine and surgery to-day is the appalling amount of suffering, affliction, and mortality which is definitely avoidable. The economic toll exacted by needless death and disability runs into the billions. Some of the life-insurance companies are making powerful and enlightened efforts toward mass education in the essentials of maintaining the body in health and vigor. The physicians, however, despite the best of intentions, are contributing far less effectually than they might to the cause of preventive medicine. Their zeal for scientific advancement knows no bounds, but they forget that much of their newly acquired knowledge must remain barren until it has become common property and its significance has been grasped and realized. Even the commonplaces of modern medicine have not been universally taught. Any adequate nation-wide program of popular medical education, such as is here contemplated, would involve heavy outlays, both of brains and of money, but its importance and its benefits, both social and economic, would be so stupendous that there is small reason to doubt that if the doctors would supply the brains the business world would find the money, and the newspaper publishers would furnish the white paper. There is no novelty in the basic idea. Many leaders of the medical profession have long had it in the back of their minds, but while it simmers there it does no good to suffering humanity. The time has come to convert good intentions into action."

Perhaps one of the most significant efforts along the line of newspaper education is that related in the October *Bulletin* of the American Medical Association. George E. Miller, editor-in-chief of the *Detroit News,* became fully convinced that the public desired authentic information along medical lines. He had received repeated letters showing dissatisfaction in the syndicated health columns because some of the information had been found to be unreliable, certain very serious questions from subscribers had been answered flippantly, and others had waited long for their answers or had received none.

He states that the profession was quick to deplore journalistic sensationalism in the handling of scientific stories; that in their own publications they flayed the lay press for printing erroneous statements so manifestly emanating from the fakir's private press agent. Yet the profession had rarely volunteered to act as the editor's friend. The reputable practitioner was always fearful and never willing to furnish trustworthy information because he thought that he might be considered unethical or a publicity seeker and thus incur the condemnation and scorn of his colleagues.

The American Medical Bulletin contends that twenty-five years ago a sick patient was examined, a diagnosis was made, and the patient treated and restored to health without telling him what was the matter, that at the present time the ideas of the public have changed, that they realize that the science of medicine has made greater strides in the past twenty-five years than in the five hundred previous and that they demand a knowledge of disease and realize fully that many diseases are preventable. To quote the *Bulletin* further: "But if the journalist has blundered sadly in medical matters, the medical man has done little better in journalism. Some of his early attempts to win good-will were pathetic and most of them were futile. A Southwestern group sought to accomplish their purpose by purchasing space in local newspapers in which to print a directory of practitioners. Elsewhere committees were formed and a busy and hurried physician made chairman and entrusted with the gigantic task of acquainting the public with the worth of recent medical advances. Generally the rare and labored expressions of the scientist, untrained in news writing, found their way into the editor's wastebasket. From the point of view of news interest alone, the output of the fakir's press agent was far more readable."

It was thoroughly evident to the editor of the *Detroit News* that the lay editor had insufficient knowledge to write on medical subjects and that the medical writer was unable to present his subject in an interesting and attractive manner so that lay people would read their publications. The plan which they have worked out and which shows the greatest possibilities is as follows:

The whole scheme was presented before the Michigan State Joint Committee on Public Health Education, which is comprised of the following: State Medical Society, University of Michigan, Michigan State College, State Health Department, State Department of Public Instructors, the Detroit College of Medicine and Surgery, Wayne County's Medical Society on Education, the Michigan State Nurses' Association, the Michigan Conference on Social Work, and the Michigan Division of the American Red Cross. Each division approved of the scheme, and one representative was appointed from each group to aid with the program, to act as censors, and to approve every word before it appeared in print. The correspondent assigned to the column "Health and Hygiene" has employed a full-time physician, well versed in general medicine and public health. This physician first writes the medical articles and then submits them to the lay editor, who presents them in a manner attractive to lay readers. They are then referred to representatives of the Michigan Joint Committee on Public Health Education for final approval. Although the majority of the work has fallen on a few members of the medical profession most of whom are members of the medical school at the university, the whole scheme has proved to be workable. Questions from subscribers that cannot be answered readily are referred to specialists from the Wayne County Medical Society, who formulate very careful and authentic answers. The letters received by the editorial staff indicate that the work is far-reaching and efficient.

The medical profession of Wisconsin likewise has been alert and has realized its opportunity and its duty. Under the direction of the Wisconsin State Medical Association a weekly press service was established which in its second year reaches every daily and 160 weekly papers in the state. The editor of this weekly news service, Mr. Holmes, is a trained man with extensive newspaper experience who says that health news is a story that finds general application in everyday life. The story must be simply, accurately and appealingly told, and it must deal with a subject on which the ordinary run of people desires information. The health story which possesses these essentials becomes real news to every editor who attempts to give his readers truthful news. Mr. Holmes expresses three guiding rules in the preparation of a health story.

1. Pick out a topic for discussion in which people are interested.

2. Write the story in simple everyday language and tell it in 600 words or less. The average reader wants the high lights and not a treatise on the subject.

3. Let the story tell something of benefit to those who read it. Leading physicians are invited to prepare 500 word statements on timely subjects which are turned over to the editor, who exercises the art and cunning of his office to render the final story attractive to lay readers. No name of a physician has appeared attached to any news article, editors and the public being informed that the news is not published to promote any individual. No expectation prevailed that the doctors would receive material benefit, but that the public would become familiar with public health, health preservation, and the great advances of scientific medicine with increased prestige of our profession.

Kansas City has adopted the plan with a vengeance through a group of lay and medical organizations under the head of the Health Conservation Association. A bulletin known as *Kansas City's Health* contains much interesting and instructive health information. Articles are written by medical men, members of the Jackson County Medical Society, with the name and honors of the writer attached. Dr. Skinner, of Kansas City, at the recent Conference on Public Health Relations, spoke at length of the work being done by his Society. Members have become enthused over the idea of public health education and medical advertising. A large committee has this work in charge and fully controls the Society's efforts. Members have been trained in public speaking and in writing. Members prepare articles on timely subjects for the lay press or radio under the authority and with the consent and control of this committee. Speakers are furnished upon request for luncheon clubs and other organizations to speak on such subjects as tuberculosis, cancer, etc. During the season 1926-1927 the Health Conservation Association had opportunity to book 1,500 addresses on health topics by both lay and medical speakers. Dr. Skinner states that they are giving to the lay press news regarding interesting and rare operations, the use of new drugs, etc., with full consent of the Society, as advertising propaganda, to sell the profession of Kansas City to the public.

At the same conference Dean Kelly of the University of Minnesota stated that State medicine could only result from a loss of confidence in medical men. His impression is that the way to prevent the adoption of State medicine is by an active interest of the medical profession in preventive medicine. He believes that it is the duty of the graduate in medicine from the University to furnish the public all the information that it can assimilate in return for the expense incurred by the State for his education. Elementary and high schools may be made great factors in the dissemination of health education. Dental work in public schools has gone far ahead of medical work, and there is no evidence that the condition has in any way worked hardship upon the dental profession.

Dr. Dodson, Executive Secretary of the Bureau of Health and Public Instruction of the American Medical Association, says that preventive medicine and public health education will play a prominent rôle in the future. There are three plans for public health education:

1. The doctors acting alone as effective in Washington, Idaho, and Oregon; or

2. By volunteer organizations alone; or

3. By the co-operation of volunteer organizations with the medical profession, which is undoubtedly the most desirable and effective meth-

od. Dodson believes that the public is determined to be informed and will get its information somewhere. Therefore it is up to the medical profession to furnish this information freely. He recommends as a good combination a committee of physicians working in co-operation with a newspaperman, the doctor to furnish material and the newspaperman to write it and make an effective story. The Maine State Medical Association co-operates closely with the State Public Health Department, the Manufacturers Association, the Federation of Labor, and similar bodies in the control of clinics and public health education. Texas goes still further where all groups co-operate in the dissemination of health education. In some states the medical profession has lost sight of the importance of lay groups, and as a result but little in the way of real health education has been accomplished.

The radio shares equally with the press in the dispensing of information. The cults have early used this means and have continued to fill the air with their propaganda. Mr. Seymour, of W. C. C. O., states that the radio reaches one out of every three or four families and that the medical speaker, as an unseen guest in the home, must deliver a talk free from technicalities and mystery. He suggests that if the profession refuses to broadcast the name of the speaker that some name be announced, such as Dr. Smith or Dr. Jones, who is in charge of ten talks on public health supervised by the County or State Medical Association and that Dr. Smith or Dr. Jones be assisted from time to time by recognized specialists who are introduced by him as his friends.

The difficulty recently experienced in the passage of the Basic Science Law in the Minnesota legislature should warn the medical profession of the need of public health education and propaganda. While we sit calmly by, all the cults are exerting every effort to sell their profession to the public; and yet we are having a great number of complaints because our medical dues were raised to $25.00 so that the State Association might have funds adequately to look after our interests, but the Chiropractors of Illinois paid dues of $120.00 last year to accomplish their aims, and I have been informed that they consider this money well spent.

Our whole profession is handicapped when new discoveries are exploited by the quacks, and the ethical doctor, who may not advertise, is considered by the public to be behind the times and reluctant to absorb new ideas. If organized medical societies were able through the means of the lay press and radio to convince the public that individual advertising is done only by the quack and unethical physician, and that the newest methods of technic that have proved efficient and safe are always used by the regular practitioner, there would be little doubt that the public would employ the physician with the higher standing. Do not misunderstand me when I refer to this use of the lay press and the radio, for I believe that all publications should emanate from the county, district, or state society, and that the use of the press and the radio by the individual for his own ends and for personal aggrandizement must be condemned.

How does all this apply to the Hennepin County Medical Society? I believe that the situation here is very similar to the one in Michigan and that with the aid of the Minnesota State Medical Association, Hennepin County Medical Society, Ramsey County Medical Society, Minnesota State Board of Health, University of Minnesota, Memorial Cancer Institute, Hennepin County Tuberculosis Association and numerous other organizations, a joint committee could be formed and a bureau maintained so that the newspapers of the Northwest might be constantly supplied with instructive articles and to which any editor might apply for authentic information regarding new discoveries and sensational claims. I would recommend to the Society that it take steps at once to appoint a large public health committee who are imbued with these ideas. The duties of this committee would be to co-operate in the formation of a large joint committee, both lay and medical, to promote public health education, to furnish articles and information to the press, and speakers for the radio and for meetings of lay organizations.

CLINICS IN VIENNA*

By R. D. Alway, M.D.
ABERDEEN, SOUTH DAKOTA

Going into a strange country and not speaking the language, one feels not only lonely but rather helpless.

Upon arriving in Vienna I located the Edison Café over which are the club rooms of the American Medical Association of Vienna. Here I found my own language was spoken and that many doctors, who are almost my neighbors in the States, were registered, and I soon began to feel at home.

The A. M. A. of Vienna is in no way connected with the A. M. A. of America, although it is an organization much the same. It is an active organization and was given a charter in 1908 in accordance with the laws of Austria.

There were about 35 members to start with. Now they have over 4,000—more than 1,000 of whom have joined in the last two years.

Its members are Active, Associate and Honorary.

Active members are non-resident, English-speaking physicians who are graduates of medical schools in good standing in their respective countries and doing or intending to do postgraduate work in Vienna.

Associate members—any physician in good standing residing in Vienna is eligible.

Honorary—This title may be conferred upon a physician or surgeon of prominence.

Officers are elected every six months and cannot be re-elected.

The A. M. A. of Vienna is recognized by the medical faculty of the University of Vienna to be the official organization for inaugurating and arranging courses for its members.

Teachers of the medical faculty have agreed to limit lectures in the English language to members of the A. M. A. of Vienna.

The University of Vienna, which is the second oldest German language university, was founded in 1365. The medical school of the university, however, was founded a little later and soon after its inauguration began to attract attention, but its fame did not spread beyond its own district until the latter half of the 18th century.

This fame was due to pioneer work of brilliant men engaged in research and also because at this time a clinic was erected patterned after the one at Leyden.

This new clinic opened in 1754 and developed such men as Haen, Stoel, and Peter Frank. In 1784 the clinic was moved to Allgemeine Krankenhaus, which is across the street from the A. M. A. Club rooms and is the largest and oldest hospital in the world. This clinic forged ahead and now leads the world in medical instruction.

It is possible to arrange courses, both didactic and practical, in every branch of medicine and surgery. These are given in both English and German, as preferred by those taking the work.

The official blue book contains complete information concerning available courses and work and may be procured by writing to the Secretary of the A. M. A. of Vienna.

These courses are called Book courses, which are didactic lectures, and practical or cadaver work.

The great majority by far of the book courses are held at the Allgemeine Krankenhaus, a few are held in close proximity to Allgemeine Krankenhaus and also a few at quite a distance from the A. M. A.

All these clinics are under the supervision of the A. M. A. I can speak personally only of clinics in my own specialty. Most courses are ten hours and are limited to from four to ten persons in a class. A few of didactic character are unlimited.

All cadaver courses are limited to two in a class and are for ten hours. Courses are listed from $3 to $10 per hour and can be divided between students.

It is rather difficult to estimate the cost of postgraduate instruction, for that depends of course upon the character of the work, the number of limited or private courses, in fact, upon the individual need of the student.

A general average might be made with a minimum of $50.00 and a maximum of $200.00 per month.

A diploma is given only when the physician taking the course spends a period of three consecutive months.

Cadaver work was practically unlimited in eye, ear, nose, and throat section. Surgery was almost impossible to get, although you are privileged to observe.

Fees over there are very small as of course the people are very poor since the war. Hospitals in Vienna are rather crude except those recently built. There has been practically no building of this character since the war.

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*Presented before the Aberdeen (S. D.) District Medical Society, at Aberdeen, S. D., January 17, 1928.

There are many brilliant men who are outstanding figures in the medical world who are instructors in the clinics,—men such as Fuchs, Rutin, Randall, Meller, Frankel, and Lorenz.

Ars Medici is a journal published by the A. M. A. of Vienna. It is a most comprehensive and widely read medical journal. It contains the newest and most useful procedures developed in the leading clinics of Vienna and Germany.

One branch called "international exchange of ideas on general practice" is devoted to questions submitted by its subscribers to be answered by leading specialists. The English edition has been issued since January, 1923, and is the only journal published in English on the Continent.

Of course during week days I was busy with clinics, but on Sundays I had an opportunity to do a little sightseeing. The city of Vienna is most unusual in its formation. It was originally a fort built by the Romans in the first century. At first the city was surrounded by a single wall, but later, as the city grew, a second wall was built outside of this. Between these two walls runs the Ringstrasse, the most beautiful street in the world. Vienna is a most beautiful and interesting city—in fact it is known as the most beautiful city in the world. It contains more handsome buildings in a limited space than any other capital.

It has most valuable art treasures preserved in museums. Music has always had its home on the "Beautiful Blue Danube." It is the home of Beethoven, and a large statue of him is erected in one of the public squares.

Besides the Allgemeine Krankenhaus one of the other landmarks is St. Stephen's Cathedral, a beautiful example of German architecture, built in 1144 and completed in the 15th century. The interior contains 38 marble altars.

Sanitary conditions are not always prevalent. In a chapel adjoining the church of St. Augustine are golden urns containing the unpreserved hearts of the royal family. The odor was unbearable.

The people of Vienna are poor, but one sees very few beggars on the street. They are friendly, hardworking, and pleasure-loving. They enjoy music, inclining more to opera than to the lighter things.

Upon my return trip I was privileged to breakfast where the boundaries of France, Austria, and Switzerland meet at a small town called Basil in Austria and Balle in France.

PROGRESS FOR THE CHILD HEALTH AND PARENT EDUCATION CONFERENCE

By Richard Olding Beard, M.D.

Executive Secretary to the Conference

In the making of a program for such an educational project as the Child Health and Parent Education Conference there are always problems to be solved and difficulties to be overcome.

Invitations to speakers meet with counter engagements. Acceptances, even, are often conditional. Topics and talkers have to be adjusted to each other. Professional obligations at home temporarily forbid travel. Distance, almost done away with in these days, is sometimes a bar. So it is that programs have to be built and rebuilt again and again. For all these causes the roster we presented in the last issue of the Journal-Lancet has to be revised. It follows:

The Prospectus of The Northwest Conference for Child Health and Parent Education

"The Child of Health"
"The Present Status of Immunization"
"The Adjustment of the Handicapped Child"
"The Need of Continuous Health Supervision of the Child"
"The Prevention and Amelioration of Handicaps"
"The Nutrition of the Child"
"Problems in the Prevention of Tuberculosis in the Young Child"
"Health Habits"
"The Development of the Child's Ego and his Mental Health"
"Paternal Education"
"Vocational Training and Guidance for Modern Youth"
"How to Make or Break the Child"
"The Preparation of Youth for Parenthood"
"Home Management and Behavior Problems"
"How Parents Establish Standards and Ideals"

"Understanding and Enjoyment of the Child"
"Adolescence"
"Character Education"
"What Can a Community Do in Parental Education"
"The Family Council"
"The Adjustment of the Family to the Demands of Present-Day Community Life"
"The Problems of Social Hygiene"
"The Child of Superior Intelligence"
"The Education of Modern Youth"
"What a Community Can Do in Parent Education"

By the next issue of The Journal-Lancet, it should be possible to announce the speakers on the program.

The prospect is good for a large attendance upon the Conference. It is the hope of its officers and committees to see a great many physicians in its several sessions,—and these not only from the Twin Cities, but from Minnesota at large and its neighboring states.

Arrangements have been made for a reduced railway rate to one and one-half fares, conditioned upon a stated number purchasing tickets.

PROCEEDINGS OF THE MINNEAPOLIS CLINICAL CLUB

Meeting of October 20, 1927

The regular monthly meeting of Minneapolis Clinical Club was held at the West Hotel, on Thursday evening, October 20, 1927, at 7 p. m. Dinner was served at 6 p. m.

The meeting was called to order by the Vice-President, Dr. Walter E. Camp.

The minutes of the May meeting and the last meeting of the Council were read and approved.

Dr. E. D. Anderson reported a case of resorcinol poisoning in an infant.

DISCUSSION

Dr. Turnacliff: I have never heard of resorcinol poisoning. I think it is used in practically all patent preparations for dermatitis. Also absorption of the drug through the skin is not common.

Dr. Beard: Were there any red blood cells in the urine?

Dr. Anderson: No; just a trace of albumin.

Dr. Barron: That is a strange thing. There must have been hemolysis, and hemolysis of the blood always shows in the urine.

Dr. Anderson: The hemoglobin dropped from 62 per cent to 42 per cent, but there was no blood in the urine. I am convinced that in this case there was an idiosyncrasy for the drug.

Dr. Wittich: How about trying a skin test of resorcinol on the child?

Dr. Anderson: After this experience I am afraid even to try it.

Dr. Hewitt B. Hannah read his inaugural thesis on "Hereditary Ataxia."

DISCUSSION

Dr. Anderson: Were all the other children normal?

Dr. Hannah: So far as I could determine. They made average progress in school, but have not been given mental age tests. They are all very successful and quite well-to-do farmers; own 640 acres of land; have a fine country home, and are respected citizens in the neighborhood.

Dr. Barron: Are the abnormal ones interspersed among the normal ones as regards date of birth?

Dr. Hannah: The oldest one is abnormal; then there are two or three normal; then an abnormal; then one or two normals; and so on until the youngest, who is abnormal.

Dr. Anderson: Ordinarily in Friedreich's ataxia do you get a history going back two or three generations?

Dr. Michael: My impression is that it is only occasionally that we get a history of Friedreich's in the immediate ancestors.

Dr. Hannah: You get a history of disease of the nervous system.

Dr. Michael: Friedreich's is very uncommon. At the General Hospital out of a group of some 1,000 neuropsychiatric cases in one year there was no case of Friedreich's disease.

Dr. Hannah: I tried to get some slides showing changes in such cases, but there was no material at the University. I also went to Chicago, but there was none there. They have not had any material on these at the University since they began the work.

Dr. Barron: Is it a congenital degenerative disease?

Dr. Michael: I am inclined to think it is hereditary and congenital.

Dr. Hannah: I avoided that question as to whether it is congenital or hereditary. Leberdowski, who has done more work than anybody else, says he does not know, so I did not feel that I could draw any conclusions.

Dr. Anderson: Do they usually live to old age?

Dr. Hannah: Yes, unless they die from some intercurrent infection. In the United States there is only one family reported where there were more than two members affected. Sanger Brown had a family containing five of the spinal-cerebellar type.

Dr. Barron: How do you make a differential diagnosis between that and multiple sclerosis?

Dr. Hannah: It is very difficult to make a differential diagnosis except perhaps by the age of onset.

Dr. Michael: Friedreich's, we should remember, is usually manifested at puberty; sometimes earlier; sometimes not before the twenties. It is a progressive disease. The psyche often remains normal. The anatomopathological characteristic of principal significance is that it is a primary degenerative disease. Nerve diseases belonging to this type, as we all know, are comparatively uncommon.

H. M. N. Wynne, M.D.
Secretary

BOOK NOTICES

An Introductory Course in Ophthalmic Optics. By Alfred Cowan, M.D., Assistant Professor of Ophthalmology, in the Graduate School of Medicine, University of Pennsylvania; 121 illustrations, many in colors. Philadelphia: F. A. Davis Company Publishers, 1927.

Each teacher of ophthalmic optics believes that he can present this subject in a simpler way than has been done before. This book represents Dr. Cowan's attempt, but he soon gets into trigonometry. Even so, his book covers the subject in a clear and concise manner and will make a good text for those desiring to study the optics of the eye.

—Kenneth A. Phelps, M.D.

Modern Aspects of the Diagnosis, Classification and Treatment of Tuberculosis. A handbook for students and practitioners. By J. Arthur Myers, Associate Professor of Preventive Medicine, Medical and Graduate Schools, University of Minnesota, with an introduction by David A. Stewart, Associate Professor of Medicine, Manitoba University. First edition, 268 pages, cloth, $5.50, Baltimore: Williams and Wilkins Company, September, 1927.

In this handbook, written for medical students and practitioners, the author has carefully covered the essential points of the diagnosis, treatment and prevention of tuberculosis. Only the recognized methods are considered. Quotations have been taken freely from Brown, Krause, Stewart, and other authorities in the field.

Part I briefly reviews the history of tuberculosis and the development of its treatment, with a short description of the organism, its methods of entrance into the body and the pathological processes produced by it at various ages.

Part II considers tuberculous infection; the history, symptoms, and modes of onset of clinical disease, and the methods of diagnosis by means of physical examination, *x*-ray and laboratory tests. The classification of patients, essential diagnostic points, and the differences between tuberculosis in the adult and the child are also discussed.

Part III covers the mechanism of healing in tuberculosis and the methods employed in treating patients to favor this process; namely, the use of rest, fresh air, diet, exercise, heliotherapy, *x*-ray, and drugs. Special consideration is given to the newer surgical methods of treatment by means of pneumothorax, phrenicotomy and thoracoplasty, and the results obtained. Separate chapters are also devoted to prognosis and the prevention of the disease.

The book is valuable as a compend of the accepted modern ideas concerning pulmonary tuberculosis.

—Thos. J. Kinsella, M.D.

Transfusion of Blood. By Henry M. Feinblatt, M.D., Assistant Clinical Professor of Medicine, Long Island College Hospital, Brooklyn, N. Y.; Hematologist to the United Israel-Zion Hospital; Pathologist to St. Peter's Hospital, etc. Illustrated by twenty-four engravings. The McMillan Company, New York, 1926.

Blood transfusion has within recent years become such a valuable and widely used therapeutic procedure that a monograph devoted to the subject is of definite value.

After a brief chapter, devoted to an historical résumé of the important steps in blood transfusion, the author covers the physiological considerations, questions of the blood grouping, selection of donors, the indications, and the dangers of the procedure. He also goes into detail in describing the various methods of transfusion. He cites literature indicating that sodium citrate is not harmful to the organism, concluding that there is no legitimate objection to the indirect method of transfusion. He is of the belief that citrated blood injected into the peritoneal cavity is of value.

In the description of blood grouping the Jansky classification is advocated instead of the more widely used Moss method, because of the fact that Jansky's work preceded that of Moss by three years. The author intimates that the present classification will need revision as there are probably other groups that have not been included.

In describing the technic of blood grouping, the writer insists that the only safe method is first to ascertain the respective groups of the patient and donor by the usual methods of mixing the cells with known Group II and Group III serum. After the bloods have been typed compatability is further assured by cross-matching the serum and cells of the patient and donor.

The author devotes a chapter to the indications for blood transfusion, enumerating the following causes: (1) sudden loss of blood from any cause, (2) surgical shock, (3) illuminating gas poisoning, (4) chronic hemorrhagic diseases, (5) as a pre-operative precaution in hemorrhagic conditions, (6) acute and subacute septic conditions, (7) diabetic coma, (8) debilitated conditions, (9) miscellaneous indications.

The author gives valuable observations on the results of transfusion in these various conditions. The technique of the various methods of transfusion is fully described. There is also a chapter devoted to blood transfusion in children.

—M. H. Nathanson, M.D.

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and The Sioux Valley Medical Association

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MINNEAPOLIS, FEBRUARY 15, 1928

DR. GEORGE G. EITEL

Dr. George G. Eitel, a very much beloved physician and surgeon, head of the Eitel Hospital, and a leading man in the Northwest for thirty-five years, died early Thursday morning, February ninth, in the Hospital where for the last sixteen years he has devoted his life to furthering the medical profession and its work in Minneapolis and the Northwest. He was sixty-nine years old, and is survived by his wife.

Brought up on a Minnesota farm, Dr. Eitel began to study medicine at a very early date, approximately 1883. He was refused admittance to the only medical school that was founded in Minneapolis, the old Minnesota Hospital College, and was told to go back and be tutored for two years for his preparatory work. He did as he was advised and studied hard under a tutor and under a physician and came back and entered the Minnesota Hospital College in 1885, from which he graduated in 1888. The editor well remembers the time of Dr. Eitel's student days, and knew him to be a hard-working, thoughtful student, full of determination; and he plodded his way through until he acquired his deserved diploma, even though the medical school of that time was not much of a school; it was owned and maintained by a group of Minneapolis and St. Paul doctors. George Eitel became a favorite student because of his earnestness. He graduated at the head of his class and received, as the first prize in surgery, a set of surgical instruments. He immediately left Minnesota for Berlin, where he spent a year in the University clinics, and on his return to the United States he practiced at Centralia, Washington. In 1890 he matriculated at the University of Pennsylvania Medical School and graduated with the famous class of 1891, which, it was said, produced more professors, authors, and scientists than any other class in that school, before or since. In 1893 he was first assistant to Dr. F. A. Dunsmoor, Professor of Clinical and Operative Surgery at the University of Minnesota. Through Dr. Dunsmoor he was appointed staff physician at Asbury Hospital. In 1900 he again made a trip to Europe and spent some time in the Berlin clinics, and in 1901, the day before Christmas, he received the degree of Doctor of Medicine from the University of Berlin, one of the highest honors to be bestowed on a scientific student.

Since that time Dr. Eitel has practiced continuously in Minneapolis and built up the famous Eitel Hospital. He was very active in civic affairs. He was a Scottish Rite Mason, a Noble of the Mystic Shrine, and a member of the Elks Club, the Automobile Club, the College of Physicians and Surgeons, and the American Medical Association. He was also connected in the earlier days with the Minnesota State Medical Association. In 1908 he was married to Miss Jeanette E. Larson, of Sioux Falls, South Dakota. Mrs. Eitel was a graduate nurse and superintendent of a hospital before her marriage and has been superintendent of the Eitel Hospital since.

Dr. Eitel's career is one which ought to inspire a young man in medicine to give the best that is in him, to go conscientiously about his work, and to accomplish something which merits the attention of the entire country.

The editor thinks Dr. Eitel had no enemies. He was a popular, genial, whole-souled surgeon, and in the early days he did much work for charity, if he could find a possible excuse for the patient not to pay him anything for his services. He is an example of what a man can accomplish under adverse circumstances because he had the determination and the desire and found the fulfillment of his powers in his advancement in the medical profession. We shall all miss George Eitel and those of us who know of his early struggles and the foundation of his hospital and office building will be inspired to follow his example so far as possible. He leaves behind him a great many mourning friends.

Services were held on Saturday, February eleventh, at Lakewood Cemetery.

HOSPITAL PUBLICITY

Minneapolis has advanced another step in its efforts to become the medical center of the Northwest. Through the influence of Thomas B. Janney, a pioneer merchant, and his wife, Mary E. Janney, there was built a pavilion on the grounds occupied by the Abbott Hospital, which has been enlarged and its facilities expanded under a new organization. This organization is announced by the Westminster Presbyterian Church. The pavilion is to be opened as a pediatric hospital and it is understood and arranged for all the pediatricians (with not more than one or two exceptions) that they will do everything in their power to advance this centrally located hospital for the treatment of the diseases of children. In a way this materially improves the pediatric center of Minneapolis. Fifty per cent more nurses will be required for the department of children's diseases, and doubtless the hospital trustees will see that this is sufficiently advertised over the country so as to advise the people of Minnesota and the Northwest that this hospital is to be in operation for the benefit of all sick children. At present it is located in a four-story building. The first floor is an isolation floor; all doubtful cases are detained there before being admitted to the hospital proper. The second floor and the third floor are devoted to the care of children's cases. The fourth floor at present, and until demands on the hospital make it necessary to turn it over to children's cases, will be devoted to mothers with their newborn babies. As soon as details are completed further prominence will be given to the type of hospital and its staff. At the present time, Minneapolis has about 4,000 available hospital beds.

"THE GREAT AMERICAN BAND WAGON"

This, strange as it may seem, is the title of a book written by Charles Merz and is a satirical survey of the typical American, but the book is rather more laughable than wrathful, for it deals with the modes and manners of the typical American in a good-natured way, and just as effectively as one that causes blows and hard words. It is published by John Day Company.

We offer an abstract of it, which will give the readers a pretty good idea of what the "Great American Band Wagon" means: "No-parking signs line the highways now. The white bones bleaching by the road are the carcasses of cast-off Fords. The Indians shoot glass balls in the three-ring circus, and iron cities have been hammered from little towns with trading posts and forts. Skyscrapers stand on the river's edge, and the West is a settled land of farms. This is a day of macadam highways, golf links, lodges, drug-store bars, Spanish suburbs, non-stop flights, and six-tube sets. But we are not static, and we do not rest. Show us something that everybody else is doing, and we are off again—on our way to a ringside seat or a college degree, a church drive or a murder trial." It is a very good description of what America's Americans are doing for their pleasure and woes. Never before has mass education in college been presented so pointedly, not as a search for wisdom but as a refrain for "everybody's doing it." "The joy of being a member of a secret society—what's it all about?—the effective combination between business and bathing beauties, sustained by men interested in the hoisery trade; the humorous aspect of the new non-alcoholic American bar, portrayed as no Englishman can or ever will; the ludicrous aspect of a northern community bristling with patios, haciendas, balconies, and houses in 'sunburned pinks, overcoat browns, smelling-salt greens, and sliced-banana yellows'—Merz weaves it all into his lecture and chuckles as he writes."

Harry Hansen, who reviews the book, says that the best chapter of the book, to his way of thinking, is the chapter entitled "Bigger and Better Murders," in which the laughable antics of a nation that pretends to be serious are exhibited for everyone to ponder. "To-day the murder trial has become the romantic fodder of the every-day reader. Does he seek information, or does he want to be entertained by what he knows is professional hocus-pocus?"

The book goes on to say that the state fails to profit by this interest in murders. Why not hold these spectacular murder trials in one of the bowls where athletic contests are held? "Five spectacles a year, each lasting forty days, would net $100,000,000 in an average bowl accommodating 50,000 people."

Merz admits that we are rather restless people and want to be in on the ground floor; and we all want to climb on the band wagon, whatever the subject, whatever the topic, whatever is at the present moment of interest.

This must be a rollicking kind of a book, very suggestive and very typical of the race and probably of all other races. In the present decade all comparative lines have ceased, and everything that is going on is in the limelight. Of course it must be very interesting and instructive and enlightening to read about the murder trials, probably because so many of the murderers escape punishment, but we will do nothing about it. We simply read of one murder after another, one excitement after another, and, like the boys in the World War, we all join in the Grand Parade. Life is now one continuous grand sporting event, and if we do not weaken we shall probably hold out for another few years. Then all the moneys that are being spent on useless, trivial, innane things, even down to a minor surgical operation, or the absorption of the poor thymus gland (which usually disappears in early adolescence) by treatment with *x*-ray, will be conserved for better purposes. The destruction of the thymus gland cannot be called one of the newer discoveries in medicine, but it gives an opportunity for a lot of doctors to jump on the band wagon again, with something alleged to be new which is probably as old as time. The reading public, however, enjoys these thrills, which are furnished the daily press, and the daily press certainly enjoys them, too, for they sell papers and that is what they are on earth for. Disseminating news of some kind—what kind is immaterial, anything that makes the people sit up and talk—is sufficient to increase the circulation of the paper and also increases the circulation of the individual who reads. So probably we get a little good "kick" out of life even if the excitement is not worth while. This all goes to prove, and this book evidently proves, that we are all a set of neurotics, a very large percentage of us at least, that is, we are more or less neurotic, and that is why we enjoy these absurd statements; they appeal to our imagination and to our personal neurosis or psychosis. That does not mean that we are all more or less crazy—but it implies it.

A VIGOROUS, BUT MISDIRECTED PROTEST

The Journal-Lancet heartily agrees with every word of the protest which we print herewith and rejoices that so many distinguished men (twenty-four) have made public their protest against an action that is fruitful of consequences measured by a largely increased death rate in the City of Chicago. Such possible results indicate the magnitude of Mayor Thompson's political act, which he, no doubt, will defend by the usual "alibi," namely, that he acted in the interest of the public when he took the Sanitary Department out of the hands of a group of visionary enthusiasts and placed it in charge of general practitioners. We surmise this plea of "insanity," which is so well calculated to fool the public, but which emphasizes the responsibility of the man who knows the wrongfulness of the act, namely, the Mayor's personal physician, a surgeon, who thus consents to the action of the Mayor and to be the beneficiary of the political and wrongful act.

We say the protest is misdirected, for we feel that the medical profession of this country should take drastic action against any physician guilty of conduct so manifestly unethical. What would this surgeon say of a general practitioner who undertook to do a critical abdominal operation in a farm house with a surgeon and a hospital near at hand and the operation not at all an emergency one? Is it ethical to jeopardize human life—community life—in this manner?

There is no alibi possible in the actual or the hypothetical case.

A STATEMENT

New York, January 15, 1928. As an aftermath of the dismissal of Dr. Herman N. Bundesen, former Health Commissioner, of Chicago, and his replacement by Mayor Thompson's personal physician, a surgeon with no public health training, a public statement has been issued by the most prominent figures in public health work in the United States protesting against the influence of politics affecting the public health and welfare of the people at large.

Not only has Dr. Bundesen been eliminated from Chicago's Health Department, but also his principal assistants, J. C. Geiger, M.D., deputy health commissioner, Arthur E. Gorman, chief sanitary engineer, and I. S. Falk, Ph. D., director of surveys, who, like their chief, are eminent sanitarians.

The statement issued, bearing the signatures of eminent persons, including two university presidents, states:

A PROTEST

The undersigned workers in the field of American public health desire to express an emphatic protest against the action of the Mayor of the City of Chicago in replacing Dr. Herman N. Bundesen, the Health Officer of that City, by a physician who, whatever his personal standing, is without apparent qualifications or experience to fit himself for the discharge of the serious duties of the office in question.

Permanence of tenure for competent health officials is an absolutely essential factor in the protection of the public against preventable disease; and the case in question seems particularly flagrant in view of the extraordinary record of Dr. Bundesen, whose brilliant services have aroused nation-wide admiration. Sacrifice of the lives of citizens of Chicago to political exploitation and personal whims is more than a local matter, since unsanitary conditions in one community may react upon an entire continent.

The action of the Mayor of Chicago strikes a blow at the most fundamental principles of good government. It should meet with prompt and vigorous rebuke from all people of Chicago who care for the reputation of their city and it should stimulate citizens everywhere to see that city charters are amended so as to make such interference with good health administration impossible in their own communities.

A. C. Abbott, M.D., Director, School of Hygiene and Public Health, University of Pennsylvania, Philadelphia.
Charles V. Chapin, M.D., Superintendent of Health, Providence, R. I.
S. J. Crumbine, M.D., General Executive, American Child Health Association, New York City
Haven Emerson, M.D., Professor of Public Health Administration, Institute of Public Health, College of Physicians and Surgeons, Columbia University, New York City
Livingston Farrand, M.D., President, Cornell University, Ithaca, N. Y.
Allen W. Freeman, M.D., Professor of Public Health Administration, Johns Hopkins University, Baltimore, Md.
Mary S. Gardner, R. N., Director, Providence District Nursing Association, Providence, R. I.
Louis I. Harris, M.D., Commissioner of Health, New York City
William C. Hassler, M.D., Health Officer, San Francisco, Calif.
William H. Howell, M.D., Director, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Md.
Guy L. Kiefer, M.D., State Commissioner of Health, Lansing, Mich.
Mrs. Walter McNab Miller, Chairman Public Welfare, General Federation of Women's Clubs; President, Association of Women for Public Health; Chairman on Health, National Council of Women.
John E. Monger, M.D., Director of Health, State of Ohio, Columbus, Ohio
Matthias Nicoll, Jr., M.D., State Commissioner of Health, Albany, N. Y.
William H. Park, M.D., Director, Bureau of Laboratories, Department of Health, New York City
J. L. Pomeroy, M.D., Health Officer, Los Angeles County, Los Angeles, Calif.
Samuel C. Prescott, S. B., Head, Department of Biology and Public Health, Massachusetts Institute of Technology, Boston, Mass.
Henry F. Vaughan, Dr. P. H., Commissioner of Health, Detroit, Mich.
George E. Vincent, Ph.D., President, Rockefeller Foundation, New York City
Lillian D. Wald, R.N., President and Head Resident, Henry Street Settlement, New York City
S. W. Welch, M.D., State Health Officer, Montgomery, Ala.
Ray Lyman Wilbur, M.D., President, Leland Stanford University, Palo Alto, Calif.
Frankwood E. Williams, M.D., Medical Director, National Committee for Mental Hygiene, New York City.
C. E. A. Winslow, Dr. P. H., Professor of Public Health, Yale University.

A NOTABLE SERIES OF ARTICLES ON TUBERCULOSIS

For some months past we have been publishing an unusually interesting and instructive series of articles on tuberculosis by Dr. J. A. Myers, Associate Professor of Preventive Medicine in the Medical and Graduate Schools of the University of Minnesota.

As a speaker at medical societies and as a teacher and writer Dr. Myers has become nationally and favorably known. Last month he delivered upon invitation two addresses before the Pennsylvania Tuberculosis Conference in Philadelphia, and he was invited by the National Tuberculosis Association to write one of the eleven articles on the "Early Diagnosis of Tuberculosis' to be prepared by men recognized nationally as experts on this subject and to be published in state and city health bulletins and in medical journals in a national campaign against tuberculosis, now under way.

The series, published in The Journal-Lancet, have expanded into a book, a review of which by Dr. Thomas J. Kinsella, of the Glen Lake (Hennepin County) Tuberculosis Sanatorium, appears on another page.

A CORRECTION

In the January 15th issue of The Journal-Lancet in which we reported the Sixth District Meeting of the Medical Society of North Dakota, there is a typographical error in the case-report of Dr. R. W. Henderson, of Bismarck, N. D., on page 40. Instead of 20 liters of 50 per cent glucose solution by hypodermoclysis, it should read 20 liters of 5 per cent glucose solution by hypodermoclysis.

MISCELLANY

IN MEMORIAM—HERMAN GUSTAVUS FRANZEN*

Herman Gustavus Frazen was born in Wedum, Sweden, on January 14, 1873, the son of John Carlson Franzen, contractor and farmer. He came to America in his boyhood with his parents. He graduated from South High School, Minneapolis, with an outstanding scholarship record, having worked his way through school.

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*Presented at the regular monthly meeting of the Society, February 6, 1928.

He taught school in the Dakotas, between college terms, and by this method was able to attend the University of Minnesota Medical School, and later the Northwestern University Medical School, at Chicago, where he received his M.D. degree in 1905.

After this he took special work in surgery at the Wesley Memorial and Cook County Hospitals in Chicago.

He began his practice in Minneapolis immediately after completing his course, and had specialized in surgery, being on the staff of Asbury Hospital. He was a member of the Hennepin County Medical Society, the Minnesota State and American Medical Associations, the Athletic Club, the Automobile Club and the Elks Club, and was a 32d degree Scottish Rite Mason.

He died January 16, 1928, and is survived by four brothers, one sister, and a widow.

A vigorous man of action, he had made for himself a successful life against odds, and has left his work while still in his prime, with no dimming of his powers, and at the height of his efficiency.

Historical and Neurologic Committee,
Olga S. Hanson, M.D., Chairman
A. S. Hamilton, M.D.
J. M. Lajoie, M.D.

SCIENTIFIC EXHIBIT AT THE A. M. A.

Arrangements are being made for the Scientific Exhibit for the Minneapolis Session of the American Medical Association, June 11-15, 1928. The Scientific Exhibit will be located in the Minneapolis Auditorium; in this building will also be housed the Registration Bureau, Technical Exhibits, and some of the Sections of the Scientific Assembly.

The Committee on Scientific Exhibit emphasizes that exhibits should be presented in a way which will stress their scientific value. This may be done by carefully worded explanatory placards, but particularly by personal demonstration. (The Committee requires that all booths shall be in charge of a competent demonstrator.) Also it should be remembered that the general attractiveness of the exhibit is essential. The Committee will do its part by having the booths decorated appropriately and will furnish uniform signs giving the name of exhibitor and the title of the exhibit. The total amount of space available in Minneapolis is only slightly larger than that available at the 1927 meeting in Washington. From the interest already manifested in the next Scientific Exhibit, it is evident that large blocks of space cannot be assigned to individual exhibitors.

Applications must be received before March 20th. In order that the amount of space available may be apportioned to the best advantage to all concerned, the Committee will make no assignments previous to April 15.

The Motion Picture Theater, on recommendation of the Board of Trustees, will be omitted at the Minneapolis Session.

NEWS ITEMS

Dr. J. L. Harkins has moved from Fargo, N. D., to Janesville, Wis.

Dr. H. W. Arndt, of Frazee, has gone to Chicago to do postgraduate work.

Dr. R. C. Gray has sold his practice at Cook, Minn., to Dr. W. C. Heim, of Duluth.

Dr. G. H. Lowthian, formerly located at Milbank, S. D., is now located at Boise, Idaho.

Dr. E. J. Ball, of Pueblo, Colo., has joined the staff of the More Hospital of Eveleth, Minn.

The Miners and the Cayuna Range Hospitals at Crosby have been consolidated. The latter will be closed.

Dr. L. B. Wilson, of the Mayo Clinic, has been made a corresponding member of the Royal Academy of Rome.

Dr. E. R. Lindner, of Hot Springs, S. D., has been appointed governor of the Battle Mountain Sanitarium at that place.

Dr. Russell Brown, of St. Paul, has become associated with the Bartron Clinic and Hospital of Watertown S. D.

Dr. George G. Eitel, of Minneapolis, died suddenly on February 9. Further notice of Dr. Eitel appears in our editorial columns.

Dr. M. M. Hursh, of Grand Rapids, Minn., has gone to Leland Stanford University, Calif., to take an extended course of postgraduate work in surgery.

Dr. A. N. Rowe, of Esteline, S. D., has resumed his practice after an absence of several weeks spent in postgraduate obstetrical work in New York City.

Dr. E. R. Sampson, a recent graduate of the Medical School of the U. of M., has joined the new Northwestern Clinic of Minot, N. D., where a new clinic building is approaching completion.

Dr. A. E. Spear, of Belfield, N. D., has purchased the practice of Dr. H. A. Davis, of Dickinson, N. D. Dr. Spear is a graduate of the Medical School of the U. of M., class of '11.

Dr. F. S. Richardson, of Belgrade, has purchased the practice of the late Dr. H. G. Franzen, of Minneapolis. Dr. Richardson is a graduate of the Medical School of the U. of M., class of '23.

The Norman County Memorial Hospital of Ada, Minn., a community hospital, made its first annual report last month, which showed that the hospital has been self-sustaining from the start.

Dr. F. C. Gibbons, a recent graduate of the

Medical School of the U. of M., has become associated with Dr. W. G. Nuessle, of Springfield, Minn. The firm name will be Drs. Nuessle & Gibbons.

Dr. Charles V. Cady, of Mabel, Minn., died last month, at the age of 81. Dr. Cady was a graduate of Bennett Medical College, class of '77, and had practiced in Iowa and Minnesota since his graduation.

According to the lay press of North Dakota Dr. F. C. Lorenz, of Elgin, in that state, did some heroic work in driving through snowbanks for twenty miles to reach a community where diphtheria prevailed.

At the January meeting of the Board of County Commissioners of Walworth county, S. D., Dr. W. A. George, of Selby, was unanimously appointed county physician, and Dr. A. V. Rock of Mobridge, assistant.

Dr. Alexander Campbell, of St. Vincent, Minn., died on January 17, at the age of 88. Dr. Campbell was a graduate of the Eclectic Medical College of Cincinnati, in the class of '81, and at once began practice in Minnesota.

Dr. William R. Jepson, of Sioux City, Iowa, will deliver an address before the faculty and students of the University of South Dakota at Vermillion on March 3. His subject will be "The Heritage of Medicine." It will be a fine address, well worth hearing.

The Surgical Society of Minneapolis elected the following officers at its annual meeting last week: President, Dr. Steven H. Baxter; vice-president, Dr. A. T. Mann; councilor, Dr. E. C. Robitshek; secretary-treasurer, Dr. T. H. Sweetser (re-elected)

Dr. Charles L. Farabaugh, who graduated from the Medical School of the University of Minnesota, class '26, and did internship work at the Ancker and the University Hospitals, has located at Robbinsdale, a suburb of Minneapolis, with offices in the Mueller Building.

Dr. W. E. Browning and Miss Selma Kittleson, of Caledonia, were married last month and have gone on a trip to South America, which will be extended to Egypt and along the Mediterranean coast, followed by a visit to Vienna and other clinics of Europe. They will not return until June.

The Janney Children's Hospital, affiliated with the Abbott Hospital of Minneapolis, has been opened with a capacity of sixty beds, and practically all of the pediatricians of the city have announced their intention to care for their patients in this hospital. This will enable pediatricians to do research work that would be otherwise impossible.

Dr. A. L. Severeide, who has been connected with the Peabody Hospital of Webster, S. D., since 1920 as an internist, has gone to Portland, Oregon. Dr. Severeide made an exellent record in the surrounding community during the past eight years, and his many friends and patients regret his departure very much, but extend many good wishes for his advancement in his new field.

At the annual meeting of the Fergus County Medical Society of Montana, held at Lewiston in January, the following officers were elected: President, Dr. J. G. Parsons, Lewiston; vice-president, Dr. E. F. Ross, Harlowton; secretary, Dr. E. A. Welden, Lewiston. Until a few years ago Dr. Parsons had practiced for a number of years in Sioux Falls, S. D., and was well known in the state as an active worker in the interests of the medical profession. He is equally active in Montana.

Dr. E. C. Miller, one of the veteran physicians of Brookings, S. D., was voted a life membership by the Brookings Kiwanis Club at its meeting last month. Dr. Miller is the first Brookings member to be so honored. He has practiced in Brookings for more than twenty-five years, has served as state senator from that county and has held other positions of trust. At the age of eighty years, he retired from active practice and was succeeded by his son, Dr. Harold Miller. Another son, Prof. S. P. Miller, is instructor in Zoölogy in the Medical Department of the University of Minnesota.

The 13th Annual Convention of the Catholic Hospital Association of the United States and Canada and the second Annual Hospital Clinical Congress of North America will be held in the Cincinnati Music Hall, Cincinnati, Ohio, June 18 to 22, inclusive, 1928. The Fourth Annual Convention of the International Guild of Nurses will be held at the same time, in the same building, at night meetings. This Convention and Congress will be one of the largest and most important hospital meetings of the year, and will comprise general scientific meetings, special clinics or demonstrations of hospital departments, and three hundred special commercial and educational exhibits. Outstanding authorities in medicine, surgery, pathology, nursing, dietetics and hospital administration, architecture and engineering will lecture and demonstrate in specially planned clinics representing the various departments of the modern hospital. A professional program of the highest interest and value is now being formulated, and all persons interested in medical and hospital service are cordially invited to attend. Further information may be obtained from John R. Hughes, M. D., Dean of the College of Hospital Administration, Marquette University, Milwaukee, Wisconsin, who is General Chairman of the Convention and Congress.

The new building of the Pierre, S. D., Clinic is nearing completion and it is estimated will be ready for occupancy about April 1. It is so situated that the main floor will be five feet above grade line and the lower floor about four feet below grade. An ambulance entrance is provided in the rear of the building, and all *X*-ray and physiotherapy equipment with complete dressing rooms, toilets, developing room, library, and reading room, and several offices are on the lower floor. The main entrance opens into a spacious reception room lighted by skylight. A hall surrounds the reception room and all offices open into this hall, making the doctors accessible to each other independently of the waiting room. Counter-height filing equipment will separate the business offices from the reception room. A two trunk inter-communicating telephone system with switch board will be installed, and the telegraph key and sounder system of signalling will be used and controlled from the switchboard. The permanent fixtures of each office as to electric wiring, plumbing and telephone outlet are exactly the same, thus permitting interchanging should necessity require. A modern steam plant has been installed operated by Oilomatic burner with thermostatic control. The building is constructed of brick and tile. Outside measurements, 50x50 ft.

The Stutsman County Medical Society of North Dakota

The last meeting of the Stutsman County Medical Society was held at Trinity Hospital, Monday evening, January 28. Dinner was served by the Hospital.

Dr. W. A. Willius, of the Mayo Clinic, addressed the Society on "Coronary Heart Diseases."

The following members were present: Drs. DePuy, Wood, Arzt, Gerrish, Bailey, Woodward, Wink, Peake, Holt, Lang, Berg, Winn, Sorkness, Johnson, Nolte, and Guest, of Jamestown; Dr. Melzer, of Woodworth; Dr. Todd, of Medina; Dr. Longstreth, of Kensal; and Dr. Carpenter, of Pingree.

The following guests were present: Drs. Wacik, Nierling, Mushberger, Reardon, from Jamestown, and Drs. Zimmerman, Moore, Spicer, Crosby, Van Houten, and Emmanuel, from Valley City.

The next meeting of the Society will be held the latter part of February or the early part of March, when Dr. W. A. Fansler, of Minneapolis, will address the Society, and Robert T. Morrison, of the Eastman Kodak Co., will show some medical films.

H. M. Berg, M.D.
Secretary

The Northwestern District Medical Society of North Dakota

The regular meeting of the Society was held on Wednesday, December 28, at 6:15 p. m., at St. Joseph's Hospital, Minot, N. D. The Sisters of St. Francis invited all the members of the society as guests in honor of the St. Joseph's Hospital Staff. The main dining room, as well as the tables, was beautifully decorated and a seven course dinner was served in a most sumptuous manner.

After the banquet, the meeting was called to order by President Wheelon. The minutes of the last meeting were approved. The application for membership to the society by Dr. Agnes D. Steuke, of Garrison, N. D., was acted on favorably by the board of censors. Dr. Agnes Steucke was unanimously elected a member of the Society and the Secretary was instructed to notify Dr. Steucke.

The committee report on "Group Nursing," of which Dr. Ransom was appointed secretary, was not ready to report. There was no unfinished business, no communications, no new business. The President called for the scientific program:

1. Empyema of gall-bladder with gallstones. Report on two other cases of gall-bladder disease; emesis gravidarum, and treatment. By Dr. Devine.
2. Cholecystography with use of tetraiodophenolphthalein. By Dr. V. J. LaRose.
3. Aneurism of femoral artery. By Dr. P. A. Nestos.

Dr. LaRose, of Bismarck, was an invited guest, and presented an instructive and enjoyable paper.

Motion made by Dr. Nestos, duly seconded and carried, that the President and Secretary act as committee of two to decide on date for next meeting and election for the Society.

The following members were present: Drs. V. J. LaRose, Wheelon, Erenfeld, Halvorson, Ransom, Kermott, McCannel, R. W. Pence, Nestos, Devine. Hanson, Yeomans, J. R. Pence, Braaflat, Fardy, A. Carr, Sr., Harlaldson.

O Haraldson, M.D.
Secretary pro tem
Andrew Sinamark, M.D
Secretary-Treasurer

Whetstone Valley District Medical Society of South Dakota

The Twelfth District Medical Society met with Dr. and Mrs. A. P. Hawkins of Waubay, on January 16.

Dr. Hawkins and his wife entertained the members of the Society and their wives at their beautiful home, first, with a four-course dinner for the physicians and their wives, after which the ladies were entertained at whist and the physicians held their regular meeting and election of officers for 1928.

The scientific papers were:

"Undulant Fever In South Dakota." By Dr. Severeide, of Webster.

"Eczema in Infancy and Early Youth." By Dr. Ferris P. Feister, Webster.

"Eclampsia." By Dr. Brown, of Webster.

These papers were followed by discussion.

The following officers were elected: President, Dr. A. P. Hawkins, Waubay; vice-president, Dr. J. A. Jacotel, Milbank; secretary-treasurer, Dr. Chas. Flett, Milbank; delegate, Dr. H. G. Harris; censor, Dr. A. E. Brown.

Those present: Dr. and Mrs. Chas. Flett; Dr. and Mrs. P. D. Peabody; Dr. and Mrs. E. O. Church; Dr. and Mrs. Hawkins; Dr. and Mrs. A. L. Severeide; Dr. Brown; and Dr. F. P. Feister.

A vote of thanks was given to the host and hostess for their splendid entertainment, after which the meeting adjourned.

The Sixth District Medical Society of North Dakota

The first meeting of the Sixth District Medical Society for the year of 1928 was held Tuesday evening, January 31, at the Grand Pacific Hotel, in Bismarck.

Dinner was served at 7 P. M. to twenty-eight members and five visitors.

Following the dinner the scientific program was taken up. Dr. L. W. Larson, Chairman of the Program Committee, presiding. He first introduced Dr. S. A. Willius, of Rochester, Minn., who presented a most interesting and instructive paper on "Coronary Arterial Disease." The paper was demonstrated by lantern slides, and was discussed by Dr. W. H. Bodenstab, of Bismarck, and Dr. J. O. Arnson, of Bismarck.

Major C. H. Lovewell, M.D., U. S. Army, who is in charge of the Medical Department, at Fort Lincoln, N. D., spoke on the subject of "Leprosy as seen in the leper colony in the Philippine Islands." He illustrated his talk with lantern slides and gave not only a very interesting talk on leprosy, but a very interesting description of the Philippino life and of the Philippine Islands, closing his talk by paying a very glowing tribute to General and Mrs. Wood.

Dr. W. H. Bodenstab reported a case of carcinoma of the esophagus, with the autopsy specimen.

Following the scientific meeting, President R. W. Henderson again presided. The routine business of the Society was taken up, and the program committees for the year were announced at this time, after which the meeting adjourned.

W. L. Diven, M.D.
Secretary

The Sioux Valley Medical Association

The Sioux Valley Medical Association held its thirty-third winter session at Sioux City, Iowa, on January 24 and 25.

The following program was presented, and the meeting was pronounced by all in attendance as one of the best ever held by the Association and the largest number ever at a banquet were present, namely, 224.

Dr. G. G. Cottan, president of the Association, presided at the banquet in a happy manner.

PROGRAM

"Dermatological Clinic." By Dr. Henry E. Michelson, Professor of Dermatology, University of Minesota. Dr. Michelson also gave lantern slides in the afternoon.

"Urological Clinic." By Dr. F. R. Wright, Professor of Urology, University of Minnesota.

"Malaria in the Treatment of General Paresis." By Dr. W. E. Ash, of Council Bluffs, Iowa. The paper was discussed by Dr. George Donahoe, of the State Insane Hospital, at Cherokee, Iowa.

"Hemorrhages from the Pregnant Uterus," with lantern slides. By Dr. Palmer Findley, of Omaha, Neb.

"Breast Tumor Problems." By Dr. Jabez N. Jackson, Kansas City, Mo., President of the American Medical Association.

"Diseases of the External Genitalia." By Dr. Franklin R. Wright.

"Fracture Clinic." By Dr. Kellogg Speed, Associate Professor of Surgery, Rush Medical College, Chicago, Illinois.

"Appendicitis-Technic and Surgical Attack Should Vary with Conditions Found." By Dr. Donald Macrae, Jr., Council Bluffs, Iowa.

Dr. Macrae also presented and discussed a case of ruptured ectopic uterus.

"Medical Clinic." By Dr. Fred M. Smith, Iowa City, Iowa, Professor of Medicine, University of Iowa. Dr. Smith also presented a number of heart cases.

"Symposium on Diseases of the Gall-bladder." By Dr. G. R. Albertson, Acting Dean of the School of Medicine, University of South Dakota; Dr. J. C. Ohlmacher, Vermillion, S. D.; Dr. R. F. Bellaire, Sioux City, Iowa; and Dr. Wm. Jepson, Sioux City, Iowa.

"Unhappy Results Following Fractures," with lantern slides. By Dr. Kellogg Speed.

"The Clinical Manifestations of Renal Insufficiency." By Dr. Fred M. Smith, Iowa City, Iowa.

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Practice for Sale

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A seven-thousand dollar practice in South Central part of South Dakota is offered for sale. Hospital accommodations. This offers a good opportunity for a live physician and surgeon. Address 445, care of this office.

Office Position Wanted

By a graduate of the Commercial Department of a District High School with several years experience as legal and medical stenographer, the latter engagement being with a well-known firm of physicians. Can also keep books and take care of office. Address 440, care of this office.

Fine Practice in North Dakota for Sale

Practice and equipment for less than price of equipment. Best and only available office. Fischer H. F. machine which cost $725 included. Wonderful chance to get an established practice. Income from start. City of 2,000 and R. R. division point. For quick sale One Thousand Dollars takes it. Address 450, care of this office.

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SOME ASPECTS OF INFANT FEEDING*

BY EDWARD DYER ANDERSON, M.D.
MINNEAPOLIS, MINNESOTA

I have chosen to speak to you this evening on "Some Aspects of Infant Feeding." Perhaps a better title for this paper would be "Some Old-Fashioned Aspects of Infant Feeding" as I am not going to speak on the more recent discoveries and contributions, but rather on certain phases of modern infant feeding which I think have been over-emphasized and should be replaced by some of the common-sense practices of many years ago. Up until comparatively recent years, very little thought was given to the care and feeding of infants by medical men. It was felt that this was not in the field of medicine and should be left more to the mothers, grand-mothers, and midwives. Great advances have been made in our knowledge of infant feeding in the last twenty-five years, due to the work of men like Jacobi, Rotch, Morse, Sedgwick, Abt, Merriott, and others, with the result that there has been a great reduction in infant morbidity and mortality, and along with this a great saving of time, worry, and work to the mothers. However, as is so often the case with any new specialty or branch of medicine, the pendulum has had a tendency to swing from the side of ignorance and carelessness to the side of ultrascientific care, with the result that sometimes I think we have lost our sense of proportion, and substituted rules for common sense. I would like to discuss, this evening, some of these matters and, although in many cases they may seem trivial and of no particular importance from the standpoint of the baby, nevertheless, I feel that they are of enough importance to the peace of mind of the mother to warrant discussion.

The first thing I would like to speak of is the question of the four-hour schedule. I was taught to believe that it was nothing short of a crime to advise the feeding of a baby any oftener than four hours. When I left school I had the feeling that, if a baby were fed any oftener than this, it would surely come to an untimely end. Although I still feel that 95 per cent of babies are contented and do perfectly well on this four-hour rule, I think now that they would do just as well on the three-hour schedule, and I also think that there are about 5 per cent of babies, in the first three month of life, who are much happier and gain better when fed every three hours. When a baby gets along well on the four-hour interval,—and as I have said, most of them do—it gives the mother so much more time and freedom that I feel they should by all means be kept on this regime. However, it is not only unnecessary but unjust to both the baby and the mother to allow the baby to cry a great deal of the time, or not gain properly if it happens to be one of those who do much better on the three-hour schedule. There are certain types of small infants who do not seem to be adequately fed on a plan where the feedings are more than three hours apart. For instance, some premature babies who are not small enough to require tube feedings, but are unable to get enough by themselves every four hours. Another type is the sleepy baby, which we so frequently meet in the first few weeks of life. Some of these simply cannot be kept awake long enough to get adequate food to meet their requirements when fed every four hours. When fed every three hours they often will get enough in the twenty-four hours to take care of them adequately. Then there is the occasional infant who vomits to excess when fed every four hours, and who does much better when given smaller amounts at more frequent intervals. To sum it up, I would say that for the majority of babies the four-hour schedule should be used, but I think that we should not have the hard-and-fast rule, which for some time was advocated, but use our judgment and feed oftener in certain types of children.

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*Presented before the Aberdeen District Medical Society of South Dakota, at Aberdeen, S. D., November 29, 1927.

I often have a severe twinge of conscience when I think of the number of mothers in the past whom I have cheated out of hours of sleep by insisting that their babies should not and must not be fed during the night. This is a subject that I feel strongly about, as I think that often real harm has been done to mothers of infants by insisting upon this rule. The average mother comes home from the hospital weak, nervous, and apprehensive in regard to her ability to care for her baby. Many of us were taught that it was positively harmful to the baby to be fed between 10 P. M. and 6 A. M., and so we have with great emphasis preached this to the mothers whose babies have come under our care. Those of you who have babies of your own know what usually happens. About one or two o'clock in the morning the baby wakes up and starts to cry. So does the mother, or at least she first wakes up and in about an hour she starts to cry because she is sure there is something the matter with her baby. If the father or some wise grand-mother does not interfere and tell the mother to go ahead and nurse the baby, it cries for two or three hours, the mother getting more and more tired and nervously upset, and, in some cases where this performance keeps up for many nights, actually injuring her health. I will admit that if the baby is allowed to cry it out for several nights that it probably will train itself to sleep through from ten to six. My point, however, is that you have done the baby no particular good and may have done the mother actual harm. In fact harm may have been done to the baby, as well as to the mother, because of loss of the mother's milk. The only value to my mind in a baby being made to sleep through the night is to give the mother more sleep, and it is no kindness to the mother to try to train the baby to do this when she is still in a weakened condition from the birth of the child. I think it is much better to feed the baby in the middle of the night for a while and wait until it is a month or six weeks old, at which time the mother will be much better able to stand two or three nights of hearing the baby cry, and then, if necessary, do this. However, most babies will go through with but one feeding from 6 P. M. to 6 A. M. of their own accord, by the time they are a month or six weeks old. This is particularly true if the mothers are advised to feed them on the following schedule from the time they are first born, or from two weeks on.

In order to allow the mother to have a regular schedule during the day, have her nurse the baby at 10 A M., 2 P. M., and 6 P. M. After the baby is fed at 6 P. M it is allowed to sleep until it wakes up. In the case of most youngsters who get enough to eat at 6 P. M., by the time they are a month old they are going until midnight or one or two in the morning. They are fed whenever they wake up and then allowed to sleep until they wake up again. If this should be 4, 5, or 6 or 7, they are nursed and made to go until 10 A. M. By following this regime it is the exceptional child who is not going on one feeding between 6 and 6 by the time he is six weeks old, and by the time he is three months old the majority are sleeping all night and do not require a night feeding at all. With the old method of waking the babies up at 10 o'clock every night to feed them, they establish the habit of being fed at 10 P. M. and they are usually six or seven months old before they sleep all night without a feeding.

Another aspect of infant feeding I would like to discuss briefly is the question of the amount of milk that should be given to a baby. This subject applies to both breast and artificial feeding. There has been a tendency in modern pediatrics to lay out a regular rule saying how much a baby at a certain age should get. This came in with the advent of the caloric system of feeding. Although this system has taught us many things, particularly in regard to the mineral food requirements to maintain life and growth, nevertheless I am convinced that we cannot feed babies by means of calories alone. You may be able to make them gain properly, but if you are going to feed them simply according to the rules of caloric requirements, you are going to have a lot of howling babies on your hands. To express it in another way, there is a difference between giving a baby enough to make it gain properly and enough to make it gain properly and also make it contented. The amount which babies need to meet this second requirement varies a great deal in individual children. The more I see of babies the more I doubt if a normal, healthy infant is ever overfed if given breast milk or a proper milk mixture. Less and less do I write an order or tell a mother to give a baby a specific amount of milk at a feeding, and more and more am I telling them to give the baby as much as it wants. I am taking it for granted, of course, that we are dealing with a normal child. I think I can illustrate my point best by giving an example along this line. About a year ago, I was called to see a month-old baby who was crying most of the time. Physical examination showed a big, healthy, normal boy, weighing nine and one-half pounds with no abnormal findings. His mother stated that he cried almost constantly. He was getting at this time an average of six ounces of breast milk at a feeding. This was all the mother had, so I advised that she complement the nursing with two ounces of a simple milk mixture at each feeding. He still continued to cry, even though we gradually increased the complement, and finally, when he was two months old, in desperation, I told the mother to give him all he wanted to eat. He took a total of sixteen ounces of breast milk and two-thirds milk mixture at a feeding, and was happy for the first time.

I realize that this is an extreme example and that the average two months' old baby is not going to require any such amount of food, but I think it illustrates the point which I would like to make; that we have been too much afraid of overfeeding. If a baby is not fed a properly balanced food, we of course can do harm by giving too much, but if the child is normal and the food is a proper one, I do not believe we need to worry about overfeeding nearly as much as we do about underfeeding.

Although I realize that I am treading on dangerous ground, nevertheless I would like to speak about complemental feeding. No one could believe in the value of breast milk more than I do, but I do feel that we are so insistent that a mother nurse her baby exclusively that we sometimes deprive a child of enough food. It is easy for us to overlook the fact that it is not necessary for a baby to get all breast milk in order to get the value contained in it. In other words, a baby getting four or five ounces of breast milk or even less is not going to be deprived of the vitamin content and the protective value against infections which breast milk contains if he is also given two or three ounces of an artificial feeding along with it. If he needs more milk than the mother has he should certainly be given a complemental feeding.

There has been a tendency in the past to state that all infants should gain a certain amount each week or month and that for a child to gain more than this meant that it would become too fat and, because of this, unhealthy. Personally, I feel that if one is dealing with a normal infant and if it is fed breast milk or a well-balanced milk mixture that it will not become overweight. It may gain for a time much more than the required five ounces a week, but it will be a gain of solid flesh and will do the child no harm. Because of this erroneous belief in regard to rapid gaining, many babies have been restricted in the amount of food they were really entitled to. The interesting thing to me about the question of gaining is that the babies who gain so rapidly during the first few months of life, and many of them will gain ten or twelve ounces a week for two or three months, will almost invariably slow up and gain less than the average child when they get between six and ten months of age, so that by the time the child has reached a year or fifteen months he does not weigh much more than the average child of his age.

Up until the last few years, infant feeding was based to a large extent upon the study of the baby's stools. Because of this, false emphasis was placed upon stools with the result that there are a lot of mothers who are worrying unnecessarily about the number, the color and consistency of their child's stools. For example, take the question of green stools. Most mothers have the idea that if their baby has a green stool, that there is something radically wrong with the child. We know now that many perfectly normal babies have green stools at times and, in fact, some have them right along. If the baby is well, is contented and is gaining properly, a green stool is of no significance. Of course, if the child is losing weight or has a real diarrhea we are dealing with a different thing, but the occurrence of green stools in a baby who is well in every other way, means nothing. In the same way, the number of stools that a normal baby should have is a cause of great concern to the average mother. It seems to be a rather general opinion that, in order for a baby to be normal, it must have two or three movements a day, and for it to have more or less than this number is an indication that the baby is sick. For the most part we medical men are largely responsible for this belief for we have taught it to the public. If a baby is perfectly well the number of stools which it has a day is of no more importance than the color of the stool. Many babies, normally, have from five to six stools a day, and, on the other hand, there are a large percentage of babies (among those that are breast fed, I should say at least 25 per cent) who normally have a stool only every two or three days. If the baby is gaining, is happy, and appears well in every other respect and the stool is not hard when it is passed, we can disregard the frequency with which the infant has a bowel movement. In the same way the appearance of curds in the stool of an otherwise normal baby should be disregarded.

Mothers are often allowed to worry unnecessarily because their babies vomit. We have overemphasized the importance of this symptom. A very large percentage of babies, during the first three or four months of life, have a tendency to vomit, some more and some less, but if the baby is gaining properly and is well we do not need to worry about it. In order to stop the vomiting we often forget the baby and cut down the food below the amount it really needs. In the majority of cases the vomiting is of the character of simple spitting up and should be disregarded. I would again emphasize the point that I am speaking of the child who is doing well in every other respect and is gaining weight consistently.

Our general tendency in the past has been to treat individual symptoms of these patients and forget the baby as a whole, often to the detriment of the child. If we would remember that we are dealing with a human being that has individual variations in regard to size, food requirements, and reaction to foods, just as you and I have individual variations, I think we would be more successful in our dealings with these babies. In other words, if we combine with our modern scientific knowledge of infant feeding some elements of common sense, the patient, the mother, and the doctor will do better.

I would like now to turn from the discussion of some of the individual problems of infant feeding and talk briefly upon the subject of artificial feeding. I am not going to discuss breast feeding and its advantages because I know that we all realize that there is no artificial food that can compare with it. No one could believe this more thoroughly than I do, and I know that no one will think that because I speak of artificial feeding, I am belittling the importance of breast-milk feeding. However, we all of us in our everyday practice are meeting babies to whom for one reason or another it is necessary to give some or all artificial food. It has been my experience to find that a large majority of medical men have the idea that infant feeding, at least applied to artificial food, is a complicated and burdensome subject. This idea undoubtedly developed in the days when either the caloric or the percentage system of feedings was used. These methods were difficult, unless one was using them constantly, and many men have the feeling that modern infant feeding is as difficult and impractical to use as it was in the past. Because of this, there has been a tendency for many men either to do no infant feeding work at all, or, if not this at least to tell most mothers to go to the drug-store and get certain proprietary foods and feed the child according to the directions on the box or can. In many instances the babies will do quite well on these foods, but sometimes they will not. Many of the proprietary foods do not give the child a well-balanced diet. They are often very high in carbohydrate content, and the average baby will do better on regular milk mixture which can be easily prescribed by the physician.

I would like, if possible, to show that infant feeding, at least for the average case, is not at all complicated and can be done by the man in general practice as well as by the man who is limiting his work to pediatrics. The great majority of babies who are brought to you and me are perfectly normal and come to us for advice in regard to their feeding because of failure to gain, excessive crying, constipation, etc. In other words, it is the exceptional child which you or I see that has pyloric stenosis, severe diarrhea, or marasmus, or decomposition, and time does not permit me to discuss these types of cases. It is of the feeding of the ninety-nine out of a hundred babies that we meet daily in our practice that I wish to speak.

If one knows how to use three or four foods, I feel that he can feed successfully nearly all babies under six months of age that require artificial food. These foods are, first, simple milk mixtures; second, lactic acid milk; third, cereal which has been cooked thick and fed to the baby in the same form in which you or I get our cereal; and fourth, protein milk.

First, as to the use of simple milk mixture. Almost all babies will do well on this type of food. From birth up until the age of two or three months they will usually thrive on a feeding made of one-half milk, one-half water, and 5 or 10 per cent carbohydrate, which is usually given in the form of dextri-maltose, although corn syrup or even cane sugar may be used. From two and one-half to three months up, until the age of four to five months, most children do well on a mixture of two-thirds milk, one-third water or cereal water, with 5 to 10 per cent carbohydrate. From this age on most children tolerate whole milk well. These simple milk mixtures are easily made by the mother and most babies like and thrive well on them.

Lactic-acid milk has become increasingly popular as a food for infants, in the last few years. Although I think it is an excellent food for most babies and I use it a great deal in my practice I do not think that it has very great advantages in feeding the average baby over the simple milk mixtures discussed in the previous paragraph. As a matter of fact, I believe that most babies will do equally well on either kind of food. There are certain types of infants, however, that will do particularly well on lactic-acid milk. The colicky baby who cries a great deal will often be more contended on this food than on any other. Another type of infant with whom it is very successful is that in which the baby is underweight, and you wish it to gain rapidly. Another group of children who respond well to this food is that in which the baby will not take much food at a time, and you wish to give it a food with high caloric content and not be fearful of digestive upsets. One can add rather a high percentage of carbohydrate (often up to 15 per cent) to lactic-acid milk without danger of diarrhea. In connection with this I will say that babies who are fed lactic-acid milk often have a tendency to looser and more frequent stools than when fed on most other milk mixtures. I am going to take the liberty of repeating how to make lactic-acid milk as I feel that there may possibly be some men present who have not the actual formula. There are many variations of the one which I am giving, but I find that this one works well in the majority of cases.

> Recipe: Boil one quart of whole milk for five minutes. Allow to get cold. Mix six ounces of water, three ounces white Karo corn syrup and one and one-half teaspoonfuls of chemically pure lactic acid, and stir this mixture slowly into the cold milk. Keep in a cool place and warm before giving.

I would like to speak briefly of the use of cereal, because it can be given with safety to the average baby by the time he is three months old, and, in fact, much younger if necessary (as in the case of pylorospasm), and it makes an ideal complemental feeding in those cases where the mother has almost enough breast milk to meet the food requirements of her infant, but still is unable completely to satisfy it. There is much less danger of the baby refusing to nurse and gradually weaning itself if it is given in place of a bottle with some milk mixture. The cereal is cooked thick and given with a teaspoon before three or four of the nursings. It is started in small amounts and gradually increased so that within a week or ten days the baby is given two or three heaping tablespoonfuls at a feeding. Also cereal, in small amounts, before each feeding is often very effective in those babies who spit up to excess.

I wish I had time to discuss colic in infancy at some length because to me it is an extremely interesting subject. However, this is impossible but I would like to mention one method which is often successful in treating these most troublesome and unhappy youngsters. That is the giving of a small amount of protein milk powder just before the nursing or bottle feeding. Usually if one gives a teaspoonful of protein milk powder with a little breast milk, artificial milk, or water just before the feeding, the baby will be much relieved. Obviously, this is not a panacea for all cases of colic, but in these days where protein milk is so easily obtained in the form of powder as put out by Mead Johnson Company, Merrill-Soule, and many others, I would suggest its trial in the manner I have described, in cases of colic.

In conclusion, I would say again that most babies can be fed easily and successfully by the use of the foods described. I know of nothing that gives one more pleasure than to help in the feeding of a baby and nothing for which we receive more real gratitude and appreciation from the parents. It is not necessary for one to be seeing a large number of babies to do this successfully, and if I have been able to show that infant feeding of most babies is a simple thing I shall feel that I have accomplished the chief purpose of this paper.

SIGNIFICANCE OF HEMORRHAGES FROM THE PREGNANT UTERUS*

By Palmer Findley, M.D., F.A.C.S.

OMAHA, NEBRASKA

The occurrence of hemorrhage in the course of pregnancy is always significant for the reason that it is never normal and may portend serious consequences. Let us group these cases into those which occur in early pregnancy and those of late pregnancy.

In early pregnancy hemorrhages may be due to abortion, in its many phases, to ectopic pregnancy, mole formations, cervical polyps, and, rarely, to carcinoma of the cervix; while in late pregnancy we are chiefly concerned with placenta previa, premature separation of the placenta and rupture of the uterus.

Abortion.—In the expulsion of the premature ovum from the uterus we have a process that physiologically resembles labour in so far as both are accompanied by loss of blood and pain. But unlike normal labour at or near term, in which the loss of blood is shortly followed by pains, dilatation, and delivery, we have in abortion not infrequently prolonged bleeding in the absence of pain, dilatation, and delivery. Indeed, there may be prolonged loss of blood which eventually ceases and the pregnancy goes on to full term with no serious consequences to mother or child.

Threatened abortion.—In threatened abortion the first and usually only symptom is bleeding. While it is never possible in any given case to define clearly and with certainty a threatened abortion in contradistinction to an inevitable abortion, yet it may be fairly stated that when the loss of blood persists over a long period of time and is excessive we are constrained to advance our position from that of "threatened" to "inevitable abortion." I have adopted the arbitrary rule to regard an abortion as inevitable when the bleeding, though slight, persists for more than three weeks and particularly so if the escaped blood is dark. Such a condition almost inevitably bespeaks a dead fetus.

Referring to the mechanism of abortion in relation to hemorrhage, we are to bear in mind that prior to the end of the first eight weeks the placenta has not been differentiated from the rest of the chorion, and the fetal sac is very small in relation to the uterine cavity. For these reasons there is little difficulty ordinarily experienced in effecting complete separation of the ovum by the escaped blood.

From the tenth week on, the ovum becomes more and more firmly attached to the uterine wall thereby rendering separation more difficult and retention more likely; hence the greater liability to persistent and excessive hemorrhages after the tenth week. Late in pregnancy degenerative changes occur, and separation of the placenta is more readily effected. The first factor in partial separation of the early ovum from its decidual attachment is the formation of a choriodecidual hemorrhage. The accumulated blood strips the chorion from the decidua in the direction of the cervix and when this process is complete the blood finds its way through the cervix; it is no longer a "concealed hemorrhage," but rather an "external hemorrhage." The amniotic sac is now so large as to make rupture highly probable and with the escape of the ovum in event of rupture of the sac. In this more advanced stage the amount of escaped blood at the placental site may not be sufficient completely to effect a separation, and the uterus may not have the capacity to expel the ovum. For these reasons retention of part or all of the ovum is possible and with persistence of bleeding. A brown discharge following the loss of bright-red blood is usually evidence of gradual liquidation of an intra-uterine clot and suggests the possible happy termination of a threatened abortion. On the other hand a persistent brown discharge betokens the development of a mole formation and the conclusion is inevitable that the fetus is dead. From the moment the discharge becomes offensive there is no question as to the integrity of the ovum.

Abortion in the early weeks of pregnancy is usually considered to be of little moment, with the result that the doctor is frequently not called and the patient is up and about in a day or two. Such individuals are commonly the victims of persistent, though moderate, bleeding and all the usual train of symptoms that accompany sub-involution of the uterus. Rest in bed for several days should always be enjoined to avoid such consequences.

In threatened abortion rest in bed is the first consideration and should be enjoined for several days after all bleeding has ceased. The diet should be light, the patient should be relieved of all worry and excitement, and all cathartics should be proscribed. Only light enemas should be given. Opiates are the sheet anchor, but should be given guardedly.

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*Presented at the Mid-winter Meeting of the Sioux Valley Medical Association, at Sioux City, Iowa, January 24-25, 1928.

When the abortion is recognized as inevitable it should be allowed to proceed without interference, provided the hemorrhage is not excessive and in the absence of fever. Unnecessary interference is liable to introduce infection and do violence to the integrity of the uterus. Furthermore, it may injure the ovum in a manner that will prevent its complete expulsion. A careful inspection of all parts passed will determine the further management of the case. When the entire ovum is expelled, there is little danger of subsequent sepsis provided there has been no instrumental interference.

In event of serious hemorrhage a firm vaginal pack will usually suffice to control the bleeding and provide for the loosening of the ovum and the dilatation of the cervix. If this fails, the ovum must be removed. An anesthetic is given, the cervix dilated, and the fingers or curet-forceps employed to empty the uterus. The curet is not a dependable instrument and may do great harm.

In event of sepsis prior to the expulsion of the ovum no time should be lost in emptying the uterus. But evacuation must be carried out with the least possible trauma. The simplest and safest method is the firm vaginal pack. If such a pack is employed and left in place for twenty-four hours with no result, the ovum should be removed, preferably by the fingers or curet-forceps, never by means of a curet.

After the twenty-eighth week hemorrhages from the pregnant uterus are almost invariably the result of separation of the placenta from its attachment to the uterine wall with resultant bleeding from the various sinuses of the placental site. Such hemorrhages are always ominous. Though the initial loss of blood may appear insignificant, there is the possibility that it is but the percursor of an alarming and possibly fatal hemorrhage. Such warnings should never be ignored if we are to safeguard the interests of mother and child.

Placenta previa.—Placent previa is referred to as the cause of "unavoidable hemorrhage." The loss of blood is unavoidable because part or all of the placental site is located in the lower uterine segment where in the process of dilating and retracting it is inevitable that the placenta will be detached from its moorings.

Suddenly, painlessly, and with no apparent cause the hemorrhage appears. This occurs not infrequently while the patient is lying quietly in bed. Commonly, at first, there is but a slight show, then a cessation for a few days when another hemorrhage occurs. Repeated hemorrhages deplete the patient, and if at any time the loss of blood is great profound shock is occasioned. Such repeated hemorrhages are a reproach upon the physician who has observed these hemorrhages and pursued the course of watchful expectancy. And if now he should proceed to deliver his patient while in profound shock he will have committed a more grievous error. *A blanched patient is never a good risk for any sort of operative procedure, and it is to just such untimely interference that much of the mortality in placenta previa is due.* When confronted with such a problem it is the duty, and the sole duty, of the physician in charge first to control the bleeding and this by a firm sterile vaginal pack. When this has been accomplished, then to institute restorative measures to the mother. It is time enough to consider ways and means of emptying the uterus after the patient has been brought out of shock. Rapid delivery, with the mother in shock, is fraught with the greatest hazards and is wholly unwarranted. The life of the baby is not the prime consideration in such an emergency.

When the hemorrhages occur after the onset of labour the danger is minimized by the contracting uterus forcing the presenting part against the detached portion of the placenta.

We must bear in mind that the risk of hemorrhage is not at an end when the uterus is emptied of its contents. There is the risk of possible post-partum hemorrhage due to the irregular attachment of the placenta and the poor contracting power of the lower uterine segment. With the patient already greatly depressed from loss of blood a moderate additional loss following the emptying of the uterus may prove fatal.

I am constrained again to stress the dangers of rapid delivery in the presence of shock. The lower uterine segment is friable and when torn will add to the loss of blood and predispose to infection. It may require but the loss of a few ounces of blood to tip the balance. Hence, the admonition to deliver with the utmost deliberation and with masterly control of the fundus.

Space will not permit of more than a brief summary of the treatment of placenta previa.

1. *Rupture of the membranes.*—This is indicated in marginal placental previa, where the head is engaged and the os partially dilated and finally in all cases as a preliminary to packing

the vagina.

2. *Vaginal pack.*—Is indicated in all cases to control hemorrhage in the presence of shock to afford time to resuscitate the mother before proceeding to delivery by whatever method.

3. *Version.*—Is indicated where the child is small and presenting by the vertex. It is essential that the os must admit at least two fingers and the membranes be ruptured.

4. *Pulling down a leg.*—Is indicated in all breech presentations and in all cases in which the os is sufficiently dilated in the presence of free hemorrhage, but in the absence of shock.

5. *Cesarian section.*—Is indicated only in the hands of an experienced operator and under favorable surroundings. It is indicated in primiparæ with central implantation of the placenta and the cervix not dilated, and the mother not in shock.

Accidental ante-partum hemorrhage—This term is now known to be a misnomer. It is no longer believed to be the result of trauma but rather of disease. A better term would be *toxemic ante-partum hemorrhage* to define a condition in which the normally implanted placenta is dislodged with resulting hemorrhage and as a consequence of more or less profound constitutional disturbances. Toxins are formed in the fetus or placenta and absorbed into the maternal blood. The toxins produce degenerative changes in the endothelial lining of the blood vessels of the decidua and uterine wall, in consequence of which blood escapes within the tissues, separates the placenta, and extravasates throughout the myometrium, and in extreme cases may filter through the broad ligaments and appendages. The accumulated blood pries loose the membranes and placenta, and the blood remains concealed so long as the membranes are not loosened at the internal os—a so-called *concealed hemorrhage.* The tonicity of the uterus is an important factor in determining the amount of blood lost within the uterus and the escape of the blood through the cervix. Where there is lack of tone the blood remains concealed and may be excessive, but with a contracting uterus sooner or later the pent-up blood will pry loose the membrane and force the blood through the cervix.

Slight toxemic hemorrhages are undoubtedly of common occurrence, and may give rise to no untoward symptoms. In fact they are usually discovered on the inspection of the delivered placenta. Severe types of concealed hemorrhage are fortunately rare and are commonly overlooked until the blood finds its way through the cervix. In such cases we are dealing with a patient who is manifestly toxic. As the blood accumulates in the uterus the patient complains of abdominal pain of a severe, rending character. The uterus rapidly increases in size, becomes board-like in consistency, and is tender to the touch. The fetal heart tones are lost, and there are no fetal movements. With all this there are the usual signs of depression from loss of blood.

The prognosis is bad largely because the condition is seldom recognized until it has reached a critical stage. Furthermore, the combination of severe toxemia and acute anemia presents a formidable problem. If the uterus regains its tone, as evidenced by the presence of blood forced through the cervix, the outlook is more encouraging. When, however, the uterus fails to contract it may be inferred that the uterine musculature is badly damaged, and to empty the uterus through the natural passage under such conditions is to invite disaster from uncontrollable hemorrhage. Such cases demand heroic measures in the face of extreme peril. Only a Porro operation, in the hands of a skilled operator, will insure any degree of safety. Where, however, the uterus is capable of firm contraction the procedure is much the same as outlined in the discussion of placenta previa.

THE SECOND NORTHWEST CONFERENCE FOR CHILD HEALTH AND PARENT EDUCATION

By Richard Olding Beard, M.D.

Professor Emeritus, University of Minnesota, Executive Secretary to the Conference

The medical profession of the Twin Cities, of Minnesota and of the surrounding states is reminded that on March 27th, 28th, and 29th the Northwest Conference for Child Health and Parent Education will be put on at the Municipal Auditorium in the City of Saint Paul.

Mr. Frederick R. Bigelow, President of the Conference, is in Europe, but plans his return in season to preside at the opening session and the evening meetings of the Conference.

A preliminary announcement of the Conference has been issued which gives large promise of the value of the program. Arrangements with certain speakers still remain to be completed. Topics may still require some modification, but the full program may be expected soon. So much of its prospectus as may be presented follows:

"Health Habits." Dr. James T. Christison.

"The Need for Continuous Health Supervision of the Child." Dr. Caroline B. Hedger, Elizabeth McCormick Memorial, Chicago.

"The Present Status of Immunization." Dr. Frederic W. Schultz, Chief of the Department of Pediatrics, University of Minnesota.

"The Nutrition of the Child." Dr. Amy L. Daniels, Professor of Nutrition, University of Iowa. Discussion by Drs. O. W. Rowe, Edgar J. Huenekens, and Woodard Colby.

"The Family Council." Mrs Eva Morse, Dept. of Education, Omaha, Nebraska.

"The Adjustment of the Child with Special Abilities and Disabilities." Dr. M. L. Stiffler, Director St. Paul Child Guidance Clinic.

"The Child of Superior Intelligence." Dr. Herbert E. Chamberlain, Director Minneapolis Child Guidance Clinic.

"Community Adjustment of Girls Through Cooperative Home Plans." Mrs. Blanche LaDu, Minnesota State Board of Control.

"Character Education." Professor Carleton Washburn, Director Winnetka Community School.

A Symposium upon "The Preservation and Amelioration of the Child."

"Structural Handicaps." Drs. C. C. Chatterton and Wallace H. Cole.

"Defects of Hearing." Dr. Horace Newhart.

"Defects of Vision." Dr. Frank E. Burch.

"Heart Handicaps." Dr. W. Ray Shannon.

"The Child's Ego and His Mental Health." Dr. William A. Burnham, Clark University.

"How Parents Establish Standards and Ideals." Mrs. Sidonie M. Gruenberg, Director Child Study Ass'n of America.

"Sex Education." Dr. George W. Friederichs, State Teacher's College, St. Cloud.

"Problems of the Modern Adolescent." Mrs. Gladys Hoagland Groves, Chapel Hill, North Carolina.

Symposium upon "Prevention of Tuberculosis in the Young Child." Drs. Arthur T. Laird, Everett K. Geer, Jay Arthur Myers, and Frank L. Jennings.

"Understanding and Enjoyment of the Child." Dr. Lois Hayden Meek, Educational Secretary National Ass'n of University Women, Washington, D. C.

"Health Habits." Round Table, conducted by Dr. Caroline B. Hedger.

"What a Community Can Do in Parental Education." Round Table, conducted by Mrs. Sidonie M. Gruenberg.

The slogan announced by this prospectus is a challenging one: "The Call of Positive Health for the Child."

The detail of business arrangements is complete. Daily morning and afternoon meetings and two evening sessions will be held in the Saint Paul Auditorium; two luncheon round table meetings daily at the Saint Paul Hotel; a luncheon meeting for men at the Saint Paul Athletic Club on Wednesday, March 28th, and a dinner meeting at the Hotel Saint Paul on the last evening, March 29th.

Some 125 institutions and organizations of the Twin Cities, of their adjoining counties and of the State at large are sponsoring the Conference. Among these are the medical and public health bodies of Ramsey and Hennepin Counties and the entire State. The officers, the director and the working committees believe that the interests of the Conference and of the medical, dental and nursing professions are mutual and they look to find these allies of this important movement for child betterment very largely in evidence at the Conference sessions.

Course tickets, *covering eleven general sessions of the Conference*, will be issued at $3.00. They are transferable to members of the family or friends. Single session tickets cost fifty cents. The holders of course tickets may secure luncheon round table tickets daily at seventy-five cents. Non-holders of course tickets will receive luncheon and admission tickets at $1.00. The Wednesday luncheon and program for men only will be issued at $1.00. The banquet on Thursday evening, March 28th, will cost $2.00.

It will be a great convenience, alike to the management and to ticket purchasers, if tickets are ordered in advance. Check or money order should accompany the order. Tickets will be forwarded by mail.

MEDICOLEGAL REPORTS AND OTHER LEGAL MATTERS AFFECTING THE PHYSICIAN*

By J. P. Aylen, M.D.
FARGO, NORTH DAKOTA

Mr. President and Members of the Sixth District Medical Society:

I feel it a great honor to have been requested to talk to you this evening on a subject of my "own choice."

The paper is suggested to me by the fact that I had in my capacity as Chief Surgeon for the N. P. Railway at Missoula, Montana, received many reports from physicians that were not worth the paper they were written on, and the fact that attorneys have repeatedly told me that physicians' reports of cases were of no practical benefit and did not serve as a guide in the trial of cases. These reports often are very embarrassing to the physician making them. Some reports are merely a statement of conclusions, not giving any hint of the facts bringing about such conclusion. The case may go to trial two years after the examination was made, new features may be added to the complaint, and the physician may be called upon to state whether such existed at the time of examination; therefore all of the findings should be set forth in a report, together with the condition and enviroment surrounding the person reported upon at the time of examination.

I would suggest an outline for a report as follows:

1. Date and address of person to whom report is made.

2. Name of person examined or title of case, such as Holes vs. Putt.

3. When and where examination is made, and who were present.

4. General appearance of the party examined, and how he presented himself, such as "walked in with limp," "carried in by two attendants," or "lying in bed at home."

Appears to be { angry, nervous, pallid, intoxicated, suffering pain; sane, insane or unconscious.

5. History of case. (Former illness, age, residence, etc.)

6. Present complaint.

7. Examination. (Temperature, pulse, respiration, urinalysis, and blood pressure reading.)

8. Examine head and neck.

(Ears, sight, mouth, glands. *Scars, wounds and pain.*)

9. Chest.

(Heart, lungs, vertebræ. *Scars, pain, wounds.*)

10. Abdomen.

(Hernia, tumors, tenderness. Condition of organs, scars, wounds.)

11. Rectum.

(Hemorrhoids, fistula, ulcers, prostatic hypertrophy.)

12. If a woman, vaginal examination of pelvic organs must be made.

13. Condition of limbs for: shortening, movements of joints, scars, deformity, pain.

14. Reflexes. (Including Babinski and clonus) (Joint sense, station.) Motor or sensory paralysis. Spinal deformity and tender spots.

15. Test for acceleration of pulse when pain elicited.

16. Summary: (Subjective. Objective.)

17. Conclusions (Diagnosis. Cause and extent of disability. Prognosis.)

18. Probable contention of opposing counsel and reason for theory not being tenable.

You will readily see how the picture will fully inform the reviewing party, whether it be a claim agent and his consulting physician or the attorney in the case. The attorney in direct examination will not get into a field he knows nothing about, but will have a complete outline of the facts presented in the order given as a basis for your conclusions, and will not present to you questions of no importance or some impossible to answer. Your examination may explain, through evidence or history of syphilis, or focal infections, some of the symptoms that are present or may later be present. The doctor, if the case goes to trial, will be prepared to exclude later elements introduced and he will at least have the satisfaction of being able to state that he examined the part, whether the findings were negative or not. Scars are described as recent, old, dragging, etc. Wounds are pictured as to size and character. Paralyses, sensory and motor, should be carefully scrutinized as to their conforming with the other neurological findings. *X*-ray pictures, if taken, should have the name of patient and the date with the initials of the operator placed in one corner for identification. In making a report you should state where the plates may be found or who has the custody of them.

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*Presented before the Sixth District Medical Society, at Mandan, N. D., December 13, 1927.

Malingering is often a factor in examining these injury cases, and grows under suggestion of various types, and should be given consideration. Malingering in personal injury cases is common; in fact, the plaintiff may be honest, yet exaggerate his symptoms. In cases of fraud, real or apparent, the attention of the medical man should be directed to the solution of the following questions:

(a) Is the party in fact suffering from the condition claimed, and

(b) Could the pretended condition result from the injuries claimed to have been received?

Almost any disease or group of symptoms may be feigned. When a physician is called upon to give an opinion as to whether or not a certain alleged injury or disease is feigned, he must base his opinion upon the relation of certain facts, rather than upon a positive knowledge that the conditions claimed are feigned. His decision must depend upon the relation between the character of the injury and the conditions claimed to result therefrom; that is:

1. Whether or not the conditions claimed might reasonably result from the accident as described;
2. What is the relation between the conditions claimed and those which are found upon examination?
3. The relation between the alleged subjective symptoms and the injury or condition claimed, and could the former have been the result of the latter?
4. Whether the subjective symptoms and conditions claimed are regular, well defined, localized, and characteristic.
5. Are the subjective symptoms consistent with the objective?

OTHER MATTER OF INTEREST TO THE PHYSICIAN

Physicians may be asked to witness a will, particularly if the patient is senile or not of disposing mind, by the parties interested in the making of the will with duress, fraud, or undue influence, because it would not be considered by the court that the physician would lend himself to any such transaction if he believed the person executing the will to be incompetent, and a physician should satisfy himself as to whether the will is made by a disposing mind, one of mental strength, with a knowledge of the property involved, its extent, and the natural objects of his affection and bounty, and that he understands the nature of his acts and the effect his will might have upon the natural objects of his bounty. He may then safely witness a will without later complications. A physician may be selected for a bequest or legacy by a grateful patient, but he must never be present when such bequest or legacy is indicated, nor may he be a witness to any document making such disposition of property. The courts view with suspicion all such instruments, knowing the influence a physician may have upon his patient.

Fractures enter into malpractice suits more than anything else, and so it becomes necessary for the physician to protect himself by every possible means. A few of these I will suggest at this time.

1. Get an *x*-ray taken at least once before and after reduction and again on discharging the patient.
2. In fracture of long bones do not be afraid of using the tape line, and see that the measurements are recorded on your progress notes or history. It is presumed that you keep records in every case.
3. See that the nurse or person in charge records on the chart your visits. They show negligence, or no negligence, to a certain degree. Also note *co-operation of patient.*
4. Have nurse initial her entries on chart, and be able to swear to their correctness. Do not let her record a visit one day and omit to mention it the next day. It is better not to make any entry than one that is not all and absolutely the whole truth.
5. The use of the fracture chart of the American College of Surgeons furnishes a good record of the case, outside of nurses' history sheet and your progress notes.

Malpractice suits usually have their origin in an attempt of a physician to collect a bill or are the outgrowth of a "shrug of the shoulders" or casual remark by a brother (?) physician. It is needless to say such practices are, or should be avoided. It is rather an uncomfortable position for a physician to find himself called to the witness stand to back up that shrug or remark; especially when either may not have been warranted, but was merely used with the vain hope that by pulling down his confrére he might elevate himself in the opinion of the patient.

I have seen this happen many times.

A line of conduct that might well be followed when a man presents himself at your office with a bandage on some part of his anatomy, is to ask who gave the first aid and then tell him to request his doctor to be present, or that you will see the case in consulation; but in no instance remove the bandage without the other physician's consent. *X*-ray pictures are also often requested, and you should tell the applicant that you will make one and send it to his doctor; but never take one and give it to the subject of the plate. A slight misplacement or irregularity in a line of fracture might lead to a lawsuit when viewed by a layman, whereas it might be a very good result in every way. A fracture result may look very bad, and even quite a deformity exist, and yet be satisfactory as to a functional result, and it may be the very best that could be obtained under *any line* of treatment. No one can tell by looking at a fracture a few weeks after it has been reduced whether the result is the best obtainable or not. The man seeing the original fracture and noting its problems is the best judge.

CONSENT TO OPERATIONS

Do you know that nearly every operation you perform, especially in the abdomen, may lead you to operate on another organ or an additional organ, and that you should have the consent of the patient, parent, or guardian (if the patient is not competent), or else you have committed an assault? You should have a blanket consent signed by the patient, parent, or guardian as the case may demand, and witnessed before attempting any operation, and such consent filed with the case history. An unauthorized operation is a trespass regardless of the motive which prompted the operator. The basis of the liability is the wrongful invasion of the person, and the proper motive is neither justification nor excuse for the "assault." The only relation of motive to the offense is its effect on the damages to be recovered. Where the motive was good and the act performed free from negligence, the law allows only compensatory damages, but never less than nominal, while in a case involving evil motive or reckless disregard of the wishes of the patient, the injured party may recover punitive damages in addition to his actual loss.

Consent in cases of emergency.—The surgeon is sometimes confronted with an emergency requiring immediate operation under circumstances where express consent is impossible, as in a case where a party is unconscious from an injury, where no one is present who in law might be presumed to have authority to speak for him. In such a case the consent of the patient, if an adult, or of the parent, if the patient is a minor, is presumed. Here the constructive consent, presumed by law from the necessity of the situation, goes only to the performance of the usual and ordinary operation to relieve the particular injury and meet the emergency, and no further, and, therefore, would not include an operation for some chronic ailment with which the injured party was suffering at the time, unless the same were practically necessary to the skillful perfomance of, or recovery from, the traumatic operation.

The law is very plain as to the status of physician and patient in these cases. Merely because the practitioner's judgment ought to be better than the judgment of the patient is no sufficient reason why the judgment of the former should prevail. This applies with special force where major operations are involved. A surgeon may not materially depart from the operation originally stipulated without the consent of his patient. This question does not arise in cases where the surgeon, during the progress of the operation, discovers unexpected conditions necessitating a greater invasion of the body, and the removal of more tissue than at first contemplated. Perhaps he intended to amputate a limb just above the knee, but finds that he can save only a few inches of the femur. I think a "blanket" consent such as I present to you will cover all situations. The sample I shall pass around is the one I use in my work.

OBLIGATIONS IMPOSED BY LAW

A person who offers his services for employment in any profession, as a practitioner in that profession, by implication contracts with his employer, and by positive requirement the law demands;

First, that he possess that reasonable degree of skill, learning, and experience which is usually possessed by a member of the profession at the *time* and *place*, and which is ordinarily regarded by the community and by those conversant with that profession as *necessary* and sufficient reasonably to qualify him for such employment;

Second, that he shall exercise reasonable and ordinary care and diligence in the exertion of his skill and the application of his knowledge to accomplish the purpose for which he is retained, and,

Third, that, in the exertion of his skill and the application of his care and diligence, he shall use his *best* judgment.

These obligations do not require the possession of the highest, or even the average, skill, but only such as will enable the practitioner to treat the cases undertaken safely and understandingly. The test of skill is; Does the practitioner possess the reasonable knowledge and skill ordinarily possessed by a member of the profession in average localities, *similarly situated* at the time?

Perhaps, at this time, it might be well to explain what some of these requirements mean or, in other words, define their scope.

Ordinary care.—The reasonable and ordinary care which is required of practitioners of a profession is such care as those in the same *general* neighborhood, in the same *general* lines of practice, at *the time*, ordinarily exercise in like cases.

Carelessness, misconduct.—Carelessness is an act of omission and involves an abuse of discretion under a definite obligation. Misconduct is an act of commission by violating a definite law or duty. Misconduct is a forbidden act and is, necessarily, indefinite, depending upon the circumstances.

That others have been similarly careless is no defense in an action for malpractice. The fact that all men are sometimes careless does not excuse any man for being careless, at any time.

Judgment.—You cannot eliminate this element from any conscious effort. In employing a person for any task the employer knows that the exercise of that person's judgment will be involved in the performance of the services, and it is that person's judgment which is being paid for. We do not expect omniscience or infallibility, and the law does not require that standard. A man's judgment may be good, bad, or indifferent, and, whichever it is, the employer engages that and nothing more. In every contract of service the law injects the stipulation that the servant must use his best judgment in the discharge of his duties.

The medical and surgical practitioner is continually required to exercise his discretion as to the course of treatment or the method of operation to be pursued. Herein he owes his patient his best judgment and nothing more. Of course as a basis for the exercise of that judgment he owes his patient the obligation to carefully diagnose the case and reasonably to inform himself of conditions and circumstances. A physician does not guarantee that his judgment is correct, nor that it is as good as the judgment of some other practitioner. Of course, reasonable information must precede the exercise of good judgment. Good faith requires that the practitioner understands before he decides. In the absence of evidence the law indulges no presumption of want of skill, care, or good judgment; neither does it infer the presence of these qualities. Ordinarily, the fact that injurious result followed treatment does not justify an inference of want of skill, care, or good judgment. The consequences complained of may be the result of the patient's condition and in no respects due to the conduct of the practitioner. *Default in skill*, care, or good judgment must be established from all the facts and circumstances in the case. The result of treatment is only of minor consideration.

That a fractured limb is shorter than the other after recovery of the patient, is not evidence that the practitioner was negligent, as such a condition might result from the nature of the fracture or the condition of health and age of the patient. The burden of explaining the fact is on the patient, and he must show that the treatment of the case was the primary cause for the shortening.

With the last portion of this paper you are all more or less familiar, but in view of the fact that we have had a large number of malpractice suits in this state and more pending, I feel that the subject of our obligations should be reviewed.

I might further suggest that in the case of pending law suits, your County Society appoint a committee to investigate the case. Have this committee visit the defendant, and get his side of the matter, then go to the doctor on the other side, and interview him, and after a conference this committee should decide what position the profession should take, in that locality. They might also advise the doctor for the prosecution as to what the profession thinks, and suggest a line of conduct, etc. This puts the profession in the proper light. The doctors will not defend a real case of malpractice, but will not see an innocent physician persecuted or mulcted for damages. This is now the custom in many other states, particularly in Minnesota.

Another point, and I am through. The physicians called in as experts on both sides of a case may increase their prestige with the court, the jury, and the public if they get together, examine the plaintiff, and make a joint report. This was done in a case tried in Moorhead, during the past year, before Judge Nye. The report was accepted, none of the doctors was placed on the stand, and the jury had no conflicting medical testimony to quibble about. They (the jury) and the court felt that they had the true facts. This report was stipulated before the examination was made. The case was against the Grand Forks Fair Association and an Amusement Company, instituted by five different individuals.

REFERENCES

Brother's Medical Jurisprudence, Taylor's Medical Jurisprudence, Peterson and Haines' Legal Medicine, and case reports.

PROCEEDINGS OF THE MINNESOTA ACADEMY OF MEDICINE

Meeting of November 9, 1927

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town and Country Club on Wednesday evening, November 9, 1927. Dinner was served at 7 P. M., and the meeting was called to order by the President, Dr. John E. Hynes, at 8 P. M. There were 31 members and one visitor present.

Minutes of the October meeting were read and approved.

The following men were elected to membership in the Academy:

Dr. Owen W. Parker, Ely, Minn., Associate Member.

Dr. Hilding Berglund, U. of M., Honorary Member.

Dr. John S. Abbott, St. Paul, Active Member.

The scientific program of the evening was as follows:

Dr. A. W. Ide (St. Paul) read his Thesis on "Spinal Injuries." This was illustrated with numerous lantern slides.

DISCUSSION

Dr. W. A. Jones (Minneapolis): I think Dr. Ide's pictures are very graphic and very clear and show us many of the peculiar conditions which are found in the spine. But, while looking over the diagnoses and pictures, I wondered whether we are very much ahead of the chiropractor and osteopath in our diagnoses; we seem to have just as much trouble in making a diagnosis. They have no trouble at all; they *know*, and the people believe that they know. How are we going to enlighten the public as to the difference between the diagnosis of the regular and that of the cultist? I think they have made just as many mistakes as we have, but it occurs to me that we are very faulty in our methods of examination. I do not believe that I could recognize one-third of the cases of fractures of the spine. The question is, how are we going to overcome the tendency of the people to accept an unethical diagnosis when we have fallen down badly ourselves. The cultists have a method of taking pictures, too. Of course, those who have seen pictures taken by a trained *x*-ray man will recognize and appreciate the difference between these and the pictures taken by the irregulars. Dr. Ide shows us very definitely in his pictures what is wrong; the inexperienced man shows us very indefinitely. The cultists attempt to diagnose, treat, and cure subluxation of the spine. I would like to ask Dr. Ide if there are very many cases of subluxation, as is claimed, and whether they are usually intractible. After hearing Dr. Ide's paper and seeing his pictures, I am still puzzled by information given out in regard to fractures, subluxations, and dislocations.

Dr. J. F. Corbett (Minneapolis): I think the railroad and various insurance companies have paid out enormous sums of money for supposed injuries to the spinal column, and of course that has only been made possible by the plaintiff receiving support from the medical profession. It seems to me it is time we got together on this. It would almost pay the corporations to spend a large sum of money to have a large number of backbones of well people *x*-rayed because anomalies in development are exceedingly common. I have nearly a peck of vertebræ which I picked up in the dissecting room, showing all sorts of defects.

There was one thing that I was in hopes Dr. Ide might show us, and that was a Charcot spine. I never saw one I recognized and would like very much to know what they look like.

It occurred to me there was only one thing he did not mention, which is sometimes of great importance, and that is spina bifida anterior, with a mass that may be in the thorax, giving the appearance of two hearts; or in some instances in the abdomen they could be mistaken for abdominal tumors. These cases are not so rare that we can call them curiosities, and I think they should have a place in the list.

Dr. E. L. Tuohy (Duluth): I would like to ask Dr. Ide if in his experience fractures of the transverse processes, low down, have been of sufficient importance or productive of enough discomfort to call for any especial surgical treatment later on?

Apropos of Dr. Ide's splendid discussion and reference to anomalies of the vertebræ, I recall a very dramatic instance of a malingerer who had twice (before he came under our observation) collected considerable sums of money from certain companies, alleging in each instance that a fall had brought on his distress. Obviously, he had found out in some way that he had such an anomaly, and in the early day of Roentgen study it was not so easy to get the clear-cut information that we now have and that is so well illustrated in Dr. Ide's slides. In fact on one occasion this man was about to be operated on in a Chicago hospital by the late Dr. Ochsner. He circumspectly left the hospital sometime during the night before. In our hands he stood for all sorts of tests—spinal punctures, etc.—and apparently had a definite level lesion. While we were studying him the claim agent of the company became anxious and gave him a considerable sum of money. Leaving the hospital in Duluth, he took a taxicab to Superior, Wis. However, some one had the foresight to follow him up and have him observed, and he was caught throwing his crutches under the sidewalk and bravely walking off!

Dr. F. R. Wright (Minneapolis): Far be it from me to discuss injuries of the spine. They are entirely out of my line. What I was especially interested in was treatment. In several cases lately I have used adhesive plaster up and down the spine. A four-inch strip of plaster extending from the cervical vertebræ to the sacrum will immobilize the spine so that the man can not bend forward.

Dr. J. F. Hammond (St. Paul): Dr. Ide spoke of the difficulty of diagnosing fracture of the spine and said, if I understood him, that the injury or fracture often was not diagnosed until operation. I would like to ask what the indications for operation are, and what operations are being done on them?

Dr. A. Schwyzer (St. Paul): Dr. Ide can be congratulated on the beautiful material he has. It was interesting to see the great variety of things we have in that one field. In order to discuss this demonstration one will have to pick out a number of detailed conditions. I think it was Dr. Jones who mentioned subluxations. They occur especially between the atlas and axis, then along on the cervical spine and again between the sacrum and iliac bone. The latter are quite frequent and cause a lot of misery, and I have seen a large number of them. A good many have come to the office and in treating them, while one man suddenly pulls with all force on the leg, another holding on the shoulders, you push the sacrum forward while pulling the ilium back. You hear a snap in the distinct cases, and, after strapping, the patient may walk out happily surprised and practically well. Regarding the subluxation between the atlas and the epistropheus, at the last meeting of the Western Surgical Association Dr. Jackson, of Wisconsin, advised against immediate prompt reduction. I do not agree with this. I have had two such injuries. By pulling carefully on the head and slightly increasing the forward and lateral bending and also a little the rotation, you can make an immediate reduction. It needs utmost care, but is by far the neatest result. Only you must have the exact anatomy of the joint before your eyes.

Another interesting condition, which was only mentioned, is Kummell's disease. That is due to injury with probably minute crushing, but at the time of injury without positive findings. An interesting case of this kind came under my observation. A young man had been wrestling and was thrown on his head. He had a good deal of pain and immobility of the head and neck. It was plain he had some definite injury, though by examining him closely I could not make out any particular condition. I kept him in the hospital with extension in bed and kept him immobilized, but the whole family of the patient, who said he felt so well, insisted on taking him home, though he was strongly advised against it. As the next best thing a high collar of strong felt was moulded and made to fit from over his shoulders to the chin and ears. The patient came back about six weeks later with a good deal of pain and the head sinking gradually to between the shoulders. The only thing to do was to make extension over a good many weeks. He finally got well.

Dr. Corbett mentioned spina bifida anterior. I would like to mention that this also occurs on the sacrum, especially in pre-sacral teratoma. These teratomata are known to reach at times into the sacral canal.

Dr. Ide's paper shows how thoroughly we have to look into the matter of injuries of the spine before we give an opinion. I would like to emphasize this by mentioning an interesting case we had recently. The patient was a woman, exceedingly nervous and almost hysterical, a farmer's wife from up north who never had been away from home. Ten or twelve years ago we operated on her for severe lacerations. It took about six months before she could feel it had done her any good. I did not see her for many years after that. She had had children in the meantime. While I was away a year ago she was operated on by another surgeon for hemorrhoids. Then last winter she was brought to me by her husband, and was a most nervous woman. She had an unbearable pain at the anus. She acted unreasonably as soon as you touched the anus. Under a little gas we did some stretching for that. But she also had pain in the pubic region and was very hypersensitive on vaginal examination. She visited a large clinic and was told it was all nervousness. Another surgeon this summer took her tonsils out, but even that (!) did not help. She now declared she had to urinate every ten or fifteen minutes. I decided to do a cystoscopy, but on the appointed day I asked her how many times she had urinated the past night. She said "once," and I found out that she had nights when she did not urinate at all. So we desisted from cystoscopy in this unreasonably nervous person, but made an *x*-ray picture. And what did we find? The pelvis was all right, but the 3d lumbar vertebra had a completely honeycombed appearance. It was a neoplasm of the entire 3d lumbar vertebra, which was not otherwise deformed except bulging laterally on both sides. This illustrates what difficulties and surprises one is liable to encounter in this field.

Dr. Ide (closing): Dr. Jones suggested the position we are in with reference to the osteopaths. It seems to me that the general run of men practicing regular medicine ought to recognize the fact that there is such a thing as dislocation of the spine. Dislocations in the cervical spine and between the fifth lumbar vertebra and the sacrum are frequently seen. Dr. Jackson, of Madison, Wisconsin, in his recent paper, described dislocation at the upper end of the spine and suggests the treatment.

Dr. Hammes (St. Paul): Did you have any cord symptoms in the case where the spine was dislocated?

Dr. Ide: Yes, we did. There was some question as to whether the patient had had a stroke or whether a fall had caused all the trouble. He had partial paralysis of one arm an done leg, but the involvement was not extensive.

The condition of spina bifida anterior probably should be mentioned, but it is somewhat difficult to diagnose. I think it is well to take it into consideration.

We have never found it necessary to resort to surgery for fractures of the transverse process. These injuries are ordinarily cured by rest treatment.

Dr. Hammond inquires about surgery in these obscure fractures. I do not operate on these spines. In case an operation is done on the spine, when the field is exposed, the actual condition of the bone is often somewhat different than that shown by the *x*-ray picture. In so far as I am personally concerned, I believe it is inadvisable to operate on spines unless the indication is positive.

I wish to thank the members for their discussion of my paper, and I also want to thank you for my membership here.

Dr. F. R. Wright (Minneapolis) read a paper entitled "Preparation of Prostatic Patients for Operation."

DISCUSSION

Dr. G. Schwyzer (Minneapolis): Recently I planned to make a suprapubic cystostomy in an old man for retention of urine where I otherwise would have applied a duration catheter, but the man had such excruciating pain from a duration catheter which I inserted that I was forced to remove the same. I would like to ask Dr. Wright whether he had experienced such difficulty in keeping a duration catheter applied?

Dr. Wright (closing): Answering Dr. Schwyzer's question about a retention catheter, it is not infrequent that a man will not be able to retain a catheter. In that case I have the patient catheterized every six hours. The effect of this will be shown by citing the case of an old Jewish friend of mine in North Minneapolis. He had an acute cystitis and had about two ounces of residual urine. He could not retain a permanent catheter, and we were compelled to make a suprapubic cystotomy. His urine secretion had dropped down to 500 c.c., but at the end of two weeks he was again passing 1,800 c.c. I think this indicates the effect of emptying the bladder too quickly.

As far as the retention of the catheter is concerned, I think it is better to catheterize the patient until you have decompressed the kidney. If relieving the back pressure in the kidney causes the suppression of urine, we can at least fill the bladder with water and attempt to raise the back pressure in the pelvis of the kidney. If we have made a suprapubic cystotomy we are not able to reduce this back pressure.

Regarding the size of the prostate, I have observed this: that on rectal examination we often find a fairly large prostate, when at the operation of this patient we remove only a very small tumor. This is due to the fact that the tumor produces a condition or edema of the prostate which we mistake for an increase in the size of the whole organ. Three times I have opened a bladder to remove an hypertrophied prostate, to find that the tumor disappeared on pressure of my fingers; that is, that the increase in size in the prostate which I had mistaken for a tumor was due to a firm edema.

Dr. Gustav Schwyzer (Minneapolis) reported a case of carcinoma of the transverse colon in a young woman, who made a quick recovery after resection. Lantern slides were shown.

Dr. William Lerche (St. Paul) showed lantern slides illustrating the arrangement of the bronchopulmonary lymph nodes and the lymphoid masses in the lungs, and also slides of cases with enlarged bronchopulmonary nodes, calling particular attention to the latter as potent factors in the etiology of bronchiectasis in children. Slides were also shown of cases with abscesses in the inferior tracheobronchial lymph nodes, and Dr. Lerche's method of operation by puncturing the abscess through the bronchoscope.

The meeting adjourned.

Carl B. Drake, M.D.,
Secretary.

PROCEEDINGS OF THE MINNEAPOLIS CLINICAL CLUB

Meeting of November 17, 1927

The regular monthly meeting of the Minneapolis Clinical Club was held at the Elks Club on Thursday evening, November 17, 1927. Dinner was served at 6 p. m., and the meeting was called to order by the president, Dr. J. M. Hayes, at 7 p. m.

The minutes of the October meeting were read and approved.

Dr. F. K. Schaaf reported two cases: one of polycythemia vera and the other a case of hypertension.

Dr. Moses Barron reported the following case, which he stated would show the importance of coincidence in diagnosis:

A man about thirty-five years of age came to St. Mary's Hospital, from Milbank. South Dakota, because of severe pain in his right leg. He was suffering such excruciating pain at the time that he had to be brought from the train in an ambulance. He stated he had not been feeling well for the past three months; had had peculiar pains in the abdomen which a doctor diagnosed at the time as probably appendicitis. He was given pills, which gave him some relief. Shortly afterwards he had pain in the upper abdomen and some pain in the back. He consulted a chiropractor, who gave him adjustments and continued doing so up to a few hours before the patient took the train to Minneapolis. The chiropractor stated that this was an unusual case, that it was probably the only case in which he failed to give definite relief, if not an absolute cure. Because of the pain in the right upper abdomen, the patient went to another doctor who took *x*-ray pictures of the stomach in order to rule out the presence of ulcer. He was then told the condition was probably that of gall-bladder disease. About three days before entering the hospital he woke up in the middle of the night with a sharp pain in the right leg. This pain extended all around the thigh and down to the knee and occasionally also through to the leg itself. At the same time he felt sharp shooting pains radiating into the right testicle. He found he was unable to urinate as usual, at times having difficulty in starting the stream. The pain would be so sharp that he would groan out in agony. He found it impossible to work and even when lying down in bed he had to have his right leg flexed and could not straighten it out. His home doctor diagnosed the condition as acute sciatica.

When first seen in the hospital, the general demeanor of the patient, together with his history, suggested a diagnosis of kidney stone, since the history was entirely atypical of sciatica. Because of the radiation of the pain in the testicle, we thought the stone was probably in the right ureter. A specimen of urine examined soon after his entrance proved entirely negative. A K-U-B *x*-ray was ordered for the next morning. The films showed a very sharply-defined shadow, "dumb-bell" shaped, in the region of the lower part of the right ureter. (*X*-ray film shown.) In order to rule out the possibility of this being bird-shot ingested from eating pheasants, the patient was given an anema and a cathartic. The shadow remained fairly well localized, though there was a slight change in position. He was given another cathartic and enema, and another *x*-ray was taken with the same result. In spite of the fact that it was an unusual shadow for a kidney stone, the clinical history, together with the shadow in the proper region, made a ureteral stone very likely. In order to corroborate this diagnosis a cystoscopy was made and pyelograms taken. The shadow of the catheter passed right through the constricted portion of the "dumb-bell" shadow. The roentgenologist felt disinclined to believe this to be a ureteral stone. A catheter was then re-inserted and a double exposure was taken in order to show the relation of the shadow to the ureter by parallax. Again the shadow almost coincided though there was a very slight shifting of several millimeters. However, with the catheter still in place, if pressure with the hand was exerted against the abdomen in the region of the shadow, a distinct displacement was obtained.

The patient was then given a small amount of barium by mouth in the evening and the next morning another roentgenogram was taken. The appendix was found partially filled with the barium, and the foreign body seemed to be in relation with the distal portion of that organ. It was now definitely established that the foreign body was not in the ureter, but most likely in the appendix. An appendectomy was performed and the appendix, about 6½ inches in length, somewhat thickened and congested, was removed. An *x*-ray of the excised appendix showed two bird-shot about one inch above the tip of the appendix lying within the lumen. The appendix showed evidence of inflammation microscopically.

DISCUSSION

Dr. R. G. Allison: I would like to ask if, when the catheter was passed, any obstruction was encountered?

Dr. Barron: No obstruction was encountered. He had tenderness in the region of the cecum all the time.

Dr. E. D. Anderson: Why did passing a catheter relieve his pain?

Dr. Barron: The two shots within the appendix were lying right over the ureter, and the passing of the catheter probably relieved some of the pressure.

Dr. C. A. McKinlay read his inaugural thesis, entitled "Atypical Hyperthyroidism."

DISCUSSION

Dr. E. L. Gardner: Dr. McKinlay has brought out some very good points. The great tendency is to think of exophthalmic goiter in terms of metabolic rates and pulse rates. We have to study these cases in toto as a clinical case by going back over the history and very often watching the patients over a period of several months in order to arrive at a conclusion. Two points in Dr. McKinlay's paper interested me.

1. A patient comes in the office with a large adenomatous goiter. Although these patients may not show any symptoms at the time of examination, many will show short periods of hyperthyroidism. I think we shall have to revise our ideas entirely, and believe that we should advise these patients that it is must safer to have their adenomatous goiter out. Many show periods of hyperthyroidism, and after many years have cardiovascular degeneration.
2. Graves' disease shows waves of improvement and exacerbation. In taking care of these cases I have always felt that a mild case of exophthalmic goiter in the first attack might be treated medically and kept under observation; if they have a second attack they should be considered in the surgical group.

Dr. McKinlay should be congratulated on this concise paper. It brings out many splendid points.

Dr. Barron: This paper is of interest to me because of my experience abroad recently. The cases of exophthalmic goiter, in Austria, seem to be different from the type which we have here. I often made rounds with Professor Falta, and in his discussions of exophthalmic goiter he stated that in the previous five years he had undoubtedly had 250 to 275 cases of this disease. In this entire series he had advised operation only once. All the others were treated medically and with *x*-ray and radium. He feels that his therapeutic results are just as good as those in which surgery has been used. Of course, over there they use long periods of rest, three or four months, if necessary. In Wenckbach's Clinic the same holds true except that they use surgery a little more often. They never use iodin there; they say they are afraid of it. They use quinin and its derivatives a great deal for their quieting effect. I was much surprised in all the clinics there to see how less often they operate on their cases of Graves' disease. I was strongly impressed with the good results in their medical treatment of goiter and on my return tried their methods on several of my cases. However, I soon found that Plummer's dictum of iodin plus surgery, as requisite in the treatment of exophthalmic goiter, holds true. Plummer recently stated that every case of exophthalmic goiter can be cured absolutely by means of this combination. If, after surgical removal, the symptoms persist in spite of continued iodin treatment, a sufficient amount of the gland was not removed at the operation. He said the patient should be operated on again, as many times as necessary, until the symptoms are entirely controlled. Only in mild cases can rest, iodin, and other therapeutic measures bring about lasting results. A well-advanced case of exophthalmic goiter will need surgery, sooner or later. Plummer states that in their series of cases operated on within the first year after onset of symptoms the mortality is about one-tenth of one per cent; after that the mortality increases rather rapidly. From their enormous experience one must conclude that the combination of iodin plus surgery brings excellent results in exophthalmic goiter.

Dr. Gardner: I think we have to be very careful in our attitude toward these cases.

We all agree that acute appendicitis is surgical. In the old days only about 20 to 25 per cent of all cases of appendicitis died. The chances were that they would get well in four cases out of five. The same thing happens in exophthalmic goiter. If we did not take care of these cases surgically, the probabilities are that perhaps three out of four would quiet down as far as the hyperthyroidism is concerned. Consequently, in every system of statistics in relation to treatment, that factor of natural tendency must be considered. When we advise a patient to have a goiter out we are advising that his chances for recovery are quicker and better by this treatment. Any adenomatous goiter patient should be advised to have his goiter removed, I believe, because of the probable danger of cardiovascular disease later in life from mild hyperthyroidism.

Dr. Hayes: I do not believe that I would agree with Dr. Gardner that all adenomatous goiters should be removed surgically. The fact that these patients stand at least a fifty per cent chance of going through life without any toxic symptoms would make it seem rather radical to advise all to be operated upon. I do believe we should tell them, as nearly as it is possible for us to do so, just what their chances are of having trouble and what the beginning symptoms of trouble might be so that they would not be so likely to delay if operation became necessary.

Dr. Gardner: A great many of these people with large adenomatous goiters go on to fifty or sixty years and then have a typical cardiovascular breakdown. There is possibly a relationship to the goiter in many cases. How many of these patients might have added ten to fifteen years to their longevity by having had the goiter out before, is uncertain. The wise thing to do is to have an adenomatous goiter out, which gives one less chance of having cardiovascular disease later in life. It seems to me it is good advice.

Dr. Hayes: Do you not think there are some symptoms usually before it comes to the point of a cardiovascular breakdown?

Dr. Gardner: When patients come in the office or hospital with early compensatory failure, the pulse usually does not respond to digitalis as it should, and the patient does not seem to do well. When they have the goiter resected in spite of the decompensation there is so frequently improvement that we often question our ability to say when an adenoma is not toxic. When they say they are just tired out, can we claim that they do not have a cardiac toxemia?

Dr. Hayes: It is true that many of these patients wait until much cardiovascular harm is done before they return for examination, and this would have been avoided if they had been operated on, but there is a large number that will refuse operation and go through life with no particular trouble, and the suggestion of surgery to them frequently makes it appear that our judgment was not good. Dr. Barron's reference to Vienna reminds me of Dr. Bauer of that city, who was here about three years ago and so confidently made the statement that there was no definite distinction between exophthalmic goiter and toxic adenoma. On visiting his clinic in Vienna, last month, I was quite pleased to know he had changed his views and was treating these cases just as we are here.

Dr. Allison: I would like to report, in this connection, the case of a young woman, a history teacher at the University of Iowa. She had a very bad exophthalmic goiter and was operated on three or four years ago but did not improve and came up here. She was advised to have *x*-ray therapy. We started her on mild *x*-ray, and there was no response. We then started deep *x*-ray and she developed tonsillitis. I had previously *x*-rayed her sinuses and teeth, both of which were normal. The tonsils were finally removed while she had a plus 90 metabolism. Three weeks later she had a basal metabolism of plus 6. She has gained twenty-five pounds in weight, returned to her work, and is quite well. She had every sign of toxic goiter.

Dr. Hayes: I recall one case similar to the one Dr. Allison has mentioned. A young woman was struck by an automobile and was considerably bruised and frightened, but apparently nothing serious at the time. Severe backache continued for two years after the injury. About this time she developed typical symptoms of exophthalmic goiter. The gland enlarged, B.M.R. plus 40, and all other symptoms present. Thyroidectomy was suggested but refused. On account of the severe backache, tonsillectomy was suggested and finally done. To our surprise not only the backache cleared up, but all symptoms of exophthalmic goiter cleared up also. Her B.M.R. came to normal one month after the tonsillectomy. She has been well since. This suggests the advisability of removing foci of infections early in the presence of toxic goiter symptoms.

Dr. Gardner: I think that is the exception rather than the rule.

Dr. Michael: I would like to ask about the status of *x*-ray treatment in these thyroid cases. Can one rely on it?

Dr. Allison: I am not as enthusiastic about *x*-ray as I was several years ago. I think some mild cases may get well and stay well under it. The cases I have had the most trouble with are the post-operative. We are unable to do anything with them. I have two cases now, a man and a woman, for the past six months. Both refuse a second operation. I have been treating them for four months; using a relatively low voltage. In those two cases, one had a plus 25 and the other a plus 40, and both have come back to normal after treatment with deep radiation. I think its effect is more permanent than Lugol's.

Personally, if I had a very toxic goiter I would be operated on. If not so toxic, I would try *x*-ray.

Dr. McKinlay (closing): In view of the mild degree of hyperthyroidism sometimes associated with adenomatous goiter beyond the fourth decade, which, nevertheless, contributes over appreciable periods of time to cardiovascular change, the emphasis upon thyroidectomy stressed by Dr. Gardner is well taken. Too many cases are seen which have been neglected in stages of the disease readily amenable to treatment.

The point of insufficient thyroidectomy is extremely important. Practically all the early recurring post-operative cases of exophthalmic goiter have had insufficient thyroidectomy. Such cases, since the introduction of Lugol's solution by Plummer, are greatly reduced in number in the hands of the expert surgeon. He has been enabled to do a complete and thorough operation on account of the quiescence of the disease. The strikingly low mortality rates reported by certain surgeons (of around 0.6 per cent in a large series) is a measure of the profound benefit of expert pre-operative and operative management.

Dr. Allison's case illustrates the importance of infection and is significant of an experience which teaches us to place great importance upon severe infections as precipitating attacks of hyperthyroidism and to emphasize eradication of foci of infection where possible. I have not seen cases in which eradication of foci alone was able to bring about a permanent cure.

Dr. Barron's experience, in coming to emphasize surgical over medical treatment, is probably common to most impartial observers, who are capable of distinguishing hyperthyroid from neurasthenic states and who have seen the very low mortality rates that at present obtain following expert surgery.

The meeting adjourned.

H. M. N. Wynne, M.D.,
Secretary.

BOOK NOTICES

Diseases of the Stomach. Diagnosis and Treatment of Diseases of the Stomach with an Introduction to Practical Gastro-Enterology. By Martin E. Rehfuss, M.D., Assistant Professor of Medicine at Jefferson Medical College. Octavo volume of 1,236 pages, with 119 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $12.00.

Diseases of the stomach by Rehfuss is one of the last books written on the subject. The book is divided into three parts. Part I treats of the embryology, anatomy, and physiology of the stomach; food-digestion, secretion, and *x*-ray examination. Part II covers all gastric diseases. Part III takes into consideration the stomach with diseases of other organs and diets.

The physiology is especially good in that all the modern views of the physiology are discussed. One is conscious of the enormous amount of work the author has done in clarifying this difficult part of body function.

The fluoroscopic method is given a prominent place in *x*-ray examination. I believe for the average practitioner that the multiple plate method with fluoroscopic control will be more helpful.

The book is well written, contains a good bibliography, and to my mind is the best modern contribution on stomach diseases. It is a book that should occupy a place in every medical library.

—Robert I. Rizer, M.D.

A Text-book of Therapeutics Including the Essentials of Pharmacology and Materia Medica. By A. A. Stevens, A.M., M.D., Professor of Applied Therapeutics in the University of Pennsylvania; Visiting Physician to the University and to the Philadelphia General Hospitals. Seventh Edition, entirely reset. 758 pages. Philadelphia: W. B. Saunders Company, 1927.

The seventh edition is entirely revised, and much new material has been enclosed so the text is modern and sound. The author has followed the original motive of his book and in a conservative and succinct manner discussed the pharmacologic actions of drugs and the uses of physical remedial agents.

This text-book has served the profession over thirty years. All official drugs had been made to conform with those of the Seventh Decennial Revision of the U. S. Pharmacopeia. Drugs were grouped under their reactions and then applied to treatment of disease. More glandular products, serums, and vaccines were included than previously with cautious consideration.

The discussion of incompatibilities is a needy warning to careful therapy, and the chapter on "Remedial Agents Other Than Drugs" is worth attentive perusual. The text is carefully arranged, sound, and conservative in discussion, and the therapy is practical and modern.

—J. A. Polzak, M.D.

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NEURASTHENIA?

In a recent paper by Dr. Peter Bassoe, of Chicago, presented at the Eighty-sixth Annual Meeting of the Wisconsin State Medical Association at Eau Claire, Wis., on September 21, 1927, he gives a very clever description of the "Origin, Rise, and Decline of the Neurasthenia Concept," giving a very definite outline of how the word "neurasthenia" came into existence. He finds the word in a German dictionary of 1821, and in Dunglison's Medical Dictionary of 1833. Yet the term "neurasthenia" is credited to Dr. George M. Beard, of New York, in 1869, although it is definitely shown that in 1855 John R. Allen, Professor of Obstetrics and Diseases of Women and Children, at Keokuk, Iowa, wrote a paper on "Neuralgia," at the conclusion of which he says: "There is a morbid state of the nervous force manifested by delirium, spasm, pain, or paralysis independent of any appreciable structural lesion." And he further considers that the "various forms of neuroses apparently are becoming wonderfully prevalent, and, we think, especially so in our Western cities. A large proportion of the ladies of families, who can afford to indulge in indolence and inactivity, and are confined to the heated and impure air of the town, and yet subject, whenever they go out, to the sudden vicissitudes and piercing winds of our climate, thus rendered to high degree nervous and susceptible, are more or less troubled with some form of nervous disorder. To preserve the complexion the general system is subjected to habits at war with the demands of nature, and the penalty is a state of nervous excitability which subjects them, in a great number of instances, to the tortures of neuralgia. Females of this class are now too commonly taught to believe that there are but three epochs in life—" 'to come out,' 'find a husband,' and 'obtain an establishment,' but I will add, and get—'the neuralgia.' " Dr. Bassoe further says: "Allen deplores 'the masculine effrontery of bloomerism and the women's rights fanaticism,' etc., as 'the system which reduces to mere nervometers the children of the opulent and indolent.' "

He then goes on to quote that for some centuries it has been understood that many nervous symptoms exist in the absence of any organic changes and among those singled out and named very early were hysteria and hypochondriasis, as the names imply erroneously connected in a fanciful way with disorders of certain abdominal organs.

"A Frenchman, Bochut, in a book published in 1860, quite clearly distinguished what he called 'nervosism' from hysteria and hypochondriasis and attributed it to nervous exhaustion," and in 1866 Austin Flint, of Bellevue Hospital, devotes one chapter of his book to "nervous asthenia," which one readily can see can be easily transposed to "neurasthenia."

Dr. Bassoe also refers to a pioneer physician of the West, John Favill, of Madison, who, in 1876, wrote a paper on mental hygiene in which he seemed to have grasped the whole situation very clearly and criticized the profession for taking no note of natural endowments or of mental aptitudes or of physical conditions, but pushing all forward into the same column and demanding of all the same day's work. Van Deusen, a graduate of the College of Physicians and Surgeons, New York, and assistant physician at the Utica (New York) Asylum, and later superintendent of the new Michigan Asylum, at Kalamazoo, wrote a similar treatise on "Observations on a Form of Nervous Prostration (Neurasthenia) Culminating in Insanity." This is observed, too, by Dr. Dana, of New York, and greatly emphasized. Consequently, the responsibility of Beard for the use of the term "neurasthenia" is simply founded on the fact that the word at that time happened to be little known and had been but little used or described. No one doubts Beard's honesty in creating what he thought was a new term.

In his usual facile style Dr. Bassoe concludes his address in the following manner?

"What is the true state of affairs in regard to the so-called psychoneuroses? Time will not permit even mention, let alone a critical digest of newer contributions, such as those of Janet Déjérine, Freud, and the other psychoanalysts, McDougall, and many others, and I will confine myself to a brief statement regarding the situation as it confronts us to-day.

"1. Of the mass of functional nervous patients that come to us probably less than ten per cent have pure nervous exhaustion or neurasthenia, and to avoid confusion it is best to designate their affliction as *fatigue neurosis.*

"2. The term *hysteria* should be retained but strictly limited to symptom complexes produced by suggestion and removable by counter-suggestion or 'persuasion.'

"3. In the remaining and more numerous cases there are two principal factors to be investigated, namely an innate sensitiveness of the mind, the so-called *emotional constitution* which usually reveals itself in early childhood, and the acquired factor of *fear* or morbid anxiety. For this group the term *anxiety neurosis* is the best to use. The sources of the fears are legion and must be patiently inquired into in every case. This neurosis is often present in patients with organic visceral disease and may cause them more anguish than the disease itself. Hence, 'the physician must study the mentality of the patient with heart disease or gastric ulcer as well as the physical signs.'

"4. In a general way all the neuroses are essentially the results of an unconscious effort on the part of the patient to protect himself against his own morbid sensitiveness or exhaustibility. The best example is the war neurosis. In civil life the precipitating situation may be one of many kinds, thus in early childhood sensitiveness to teasing by others, or failure at school; later, love affairs, marital troubles, unsuitable vocation, fears about bodily health, etc., etc.

"To sum up, the term neurasthenia is a milestone in the history of medicine, which at first marked progress but now impedes it, and while we should retain the useful ideas of the creators of the term we had better drop the term itself as its use leads to neglect of necessary inquiry into the inner life and the environment of the individual patient.

"Let me conclude with a note of optimism. While it is true that some people are born to neuroses, a great many more have neuroses thrust upon them on account of unsuitable and often very complicated environmental influences, yet with growth of intelligent interest in the facilities for wholesome education in the widest sense of the term the human race will ultimately learn to conquer the neuroses as it has so many of its other visible and invisible enemies. Physicians must learn to be educators and counselors in problems of human conduct as well as students and healers of disease."

THE A. M. A. MEETING IN MINNEAPOLIS

There seems to be some confusion and uncertainty about the dates on which the Association comes to Minneapolis for its annual meeting, and in order to prepare our readers we will state that the meeting is to be held in Minneapolis from June eleventh to June fifteenth, inclusive. The first day of registration is Monday and the last day of the session is on Friday.

Naturally the members of the Association will be coming in at various times, and it is no doubt true that some of the members will be here the week preceding the week of the Association meeting. In view of this fact, the railway passenger associations throughout the United States have authorized a rate of one and one-half fares for the benefit of members of the American Medical Association and dependent members of their families who attend the annual session in Minneapolis. In order to obtain this reduced fare it will be necessary for each member to secure a certificate from the railroad ticket agent when he purchases his ticket to Minneapolis. The certificate must be certified by the secretary of the American Medical Association, which may be done at the registration bureau to be located in the Auditorium, in Minneapolis, and then be validated by a representative of the railroads who will be on duty from June eleventh to June nineteenth. When a certificate is so certified and validated, it will entitle the holder to purchase a return ticket at one-half fare to his home over the same route traveled to Minneapolis. If the ticket agent at the member's home station does not have the certificate he will furnish information as to where it may be obtained. The certificate is not a receipt for money paid for a ticket, nor will a receipt entitle its holder to secure a return-trip ticket at reduced rates. Be sure and ask the ticket agent for a certificate.

The dates of the sale of tickets to Minneapolis will be June seventh to June thirteenth, inclusive, within certain territories. In more distant territories tickets will be sold beginning June fourth; for instance, in Oregon and Washington the tickets will be on sale June fourth instead of June sixth. This does not interfere with summer excursion rates, which also will be in effect at the time of the annual session of the A. M. A. Information with respect to these rates may be secured from the local ticket agent.

The meeting of the American Medical Association will be in the new auditorium in Minneapolis, which will also be the headquarters for the Association. There will be no hotel in Minneapolis known as the headquarters hotel. Neither will it be known until a later time where the various sections are to meet. But all this information will be supplied in ample time for any who choose to attend the meeting.

CRITICISING THE ALIENISTS

In many of the papers over most of the country there are occasionally editorials or paragraphs selected from other publications which reflect on the honesty and value or worth of the alienist's opinion, and they even poke fun at the man who is unable to decide whether or not he has insanity as a defense for the criminal's acts. Of course these various murder trials in which these insanity cases have been advanced have so far come to utter defeat. One of the papers makes sport of the alienist, who is accused of testing sanity by "tickling the foot or drawing skin pictures," and the papèr goes on further to say that this places the neurologists who devise a defense for the hit-and-run motor drivers in the same category with the alienists that are called in defense of a murderer. It seems it must have been done somewhere, in some case, for the paper goes on to call the offender a "neuromotor defective, one who suffers from an ailment that makes him unable to control his actions after a severe shock." And it rather suggests that there are a large number of these people at large and that they suffer from this kind of a psychosis and so become potential clients for defense court strategy.

We cheerfully admit that there are a lot of fool drivers, reckless and careless drivers, of motor cars who hit and run, but they are usually apprehended some time and pay the penalty. And even when the insanity defense is tried the jury promptly brings in a verdict against them. A jail sentence of four to six months gives the offender an enforced rest cure. He has plenty of sleep, is well cared for and housed, and he does a little work of an entirely different but simpler nature than running over people and thus rests his seemingly overwrought psychomotor system.

Evidently this subject has been debated more in the East than in the West, except in the far West, and some Easterner is praying for an Ezekiel "who will look us straight in the face and tell us that in spite of our white complexion we have a deep-yellow streak in us, that we are always getting into trouble and blaming something or somebody else for it—eternally passing the buck.

"It was Thy servant, Ezekiel, who called a halt to the canting, whining co-religionists of his day who were using heredity to cover up their weaknesses and criminal tendencies. 'Our fathers,' they said, 'have eaten sour grapes, and the children's teeth are set on edge.' Through all of such subterfuges and evasions of personal responsibility Thy servant looked with penetrating eye and declared 'The soul that sinneth, it shall die.'

"And Thou knowest that to the excuses of that ancient people—their sour grapes and heredity—we have added environment, tonsils, adenoids, complexes, temporary insanity, and others, unknown no doubt to Thee but familiar to our alienists. And our condition grows worse. Send us, we pray Thee, an Ezekiel, or, if Thou canst spare them, a few extra; an Ezekiel to alienistize the alienist; an Ezekiel for the bench and jury, who will look through the shams and windy words of alienists and declare, 'The soul that sinneth, it shall die.' "

This suppliant is, by name, E. A. Lemoine, of Smyrna, Delaware.

THE BENEFACTIONS OF PHYSICIANS

The handsome gift of $80,000 made by the late Dr. George G. Eitel to the University of Minnesota to provide a fund for needy medical students and a loan scholarship, is illustrative of the benefactions that practically all physicians make to the public. Although the sum given in this case is large it was, no doubt, exceeded by the private gifts, in money and services, made by Dr. Eitel during his professional life.

We are glad to do honor to the memory of the man who set the medical profession this fine example of generosity, both public and private; and we trust that many other physicians may receive from the public due praise for a like service rendered almost daily in their work of alleviating suffering and preserving life.

MISCELLANY

DR. WILLIAM DAVID JONES—AN APPRECIATION

Dr. William David Jones, of Devils Lake, died at the Mercy Hospital in that city on Saturday evening, February 18, of pneumonia complicated by cardiac insufficiency.

Dr. Jones had returned from a restful vacation trip to Florida, at the latter end of January, and contracted influenza on the way to the north. Only three days before his death he consented to his removal to the Mercy Hospital where he had done most of his surgical work for thirty years. During the last hours of his life he discussed his symptoms with brother practitioners and quoted medical authority for his own opinion that he would not recover.

It was the writer's privilege to know Dr. Jones rather intimately since 1901. North Dakota surgery twenty-five years ago was not materially touched by the influence of the larger clinics. The surgeon who could carry with him to the private farm home an abundance of well-sterilized and skillfully managed equipment was received gladly. Dr. Jones supplied this need in a large territory of central North Dakota which later became known as the Lake Region. Acute infection in all its forms furnished a fertile field for study. The acute appendicitis and septic gall-bladder could be more safely operated on at home than transported over the rough country roads of that day to a city hospital. Thus, eastern skill and technic came to the bedside of the western farmer.

Dr. Jones was the oldest member of the Devils Lake Medical Society. He was active on several committees in charge of arrangements for the coming State meeting, in May, at Devils Lake. He attended and thoroughly enjoyed the 1927 session at Grand Forks.

He was born in Pawnee, Illinois, in 1860 and received his degree in medicine at Northwestern University in March, 1887, being a classmate of Dr. Charles Mayo.

Mellowed by advancing middle age, Dr. Jones was one who received genially the friendly confidences of his fellow practitioners and for this reason was an esteemed friend and consultant. He was a keen sportsman, an entertaining raconteur, a well-read physician and surgeon, and was always what is called by the layman a "square shooter."

In the Devils Lake Society and the State Medical Association he will be missed.

J. G. Lamont, M.D.

MINNEAPOLIS CHILDREN'S HOSPITAL ORGANIZED

Building has been built and equipped with every modern facility for the care of sick children.

The Board of Trustees of Westminster Presbyterian Church, of Minneapolis, wishes to announce the organization of the Janney Children's Hospital in affiliation with the Abbott Hospital. The Janney Children's Pavilion, with a capacity of sixty beds, which was built and equipped by the late Mr. T. B. Janney and Mrs. Mary E. Janney, his wife, in 1921, has now been made into a separate unit for the care of sick children. This Hospital offers the people of Minneapolis and the Northwest a new, improved, modern service which has a specially trained staff of physicians and nurses to care for the unfortunate sick child. The new Janney Children's Hospital is endorsed by the leading Pediatricians in Minneapolis who have long felt that a Children's Hospital would be a great advantage in the best interests of the community for scientific treatment of sick children.

This new Hospital will not affect the Abbott Hospital in any way, for the adult patients will be cared for in the other buildings.

The Abbott Hospital has operated a large children's department since the Janney building was built in 1921, but with increasing demands for the accommodation of children this new service through the Janney Children's Hospital will fulfill a longfelt want admirably.

The scientific care of sick children required special hospital facilities and a trained corps of nurses which the average hospital cannot maintain. Young children require the closest observation due to the fact that they cannot make their symptoms and wants known; therefore it requires special training of the nurse to detect any change in the small patient's condition so that the physician may be advised, and immediate steps taken to remedy the condition. The matter of equipment is also very important, for in dealing with children special apparatus and supplies are necessary to secure the best results.

Minneapolis has been recognized as one of the leading pediatric centers in the United States, and this new hospital will be welcomed by the citizens of Minneapolis and the people of the Northwest.

The Janney Children's Hospital will be a haven of health, for its doors will be open to all needy, sick children. In the year 1927 this branch of the Hospital provided 2,489 hospital days free treatment to kiddies who were admitted through the Children's Protective Society, the Jewish Welfare and other charitable organizations caring for the welfare of our younger generation.

The Children's Hospital appeals to one's sympathy possibly more strikingly than any other philanthropic institution, and any endowment will be used to provide this worthy, improved hospital service to needy children. Our city's child mortality could be greatly reduced if funds were available to care for hundreds of needy cases which require hospitalization.

This hospital can be a great asset to our community by providing the best possible care for its beloved children in an atmosphere where the motto is, "Love, kindness, cheerfulness, sympathy, faithful and efficient service to the sick and suffering."

The public is cordially invited to take an interest in this wonderful work, and the Hospital authorities always welcome visitors and take pride in showing them what is available here in Minneapolis for our sick and suffering children.

NEWS ITEMS

Dr. T. J. Strong has moved from Wahpeton, N. D., to Fargo, N. D.

Dr. C. W. Houser, a retired physician of St. Paul, died last month at the age of 74.

Dr. H. A. Owensen, formerly of Grace City, N. D., is now located at Minot, N. D.

Dr. Frederick Brown, formerly of McClusky, N. D., is now located at Valley City, N. D.

Dr. A. J. Ostrander, of Enderlin, N. D., has accepted a government position at Helena, Mont.

Dr. W. F. Mercil, of Duluth, was married last month to Miss Victoria La Londe, of Gilbert.

Dr. J. R. Nagle, of Onida, Neb., has joined the staff of the Bartron Hospital at Watertown, S. D.

Dr. Mark Mizener, of Parkston, S. D., has sold his practice to Dr. F. J. Tobin, of Mitchell, S. D.

Dr. John H. Rishmiller, of Minneapolis, has returned from his annual vacation at Belle Air, Florida.

Dr. H. J. Berens, of Excelsior, Minn., was married last month to Miss Isabel Bladon, of Minneapolis.

Dr. Winchell McK. Craig, of Rochester, was married last month to Miss Jean K. Fitzgerald, of Canton, Ohio.

Dr. P. D. Peabody of the Peabody Hospital, at Webster, S. D., went to Havana, Cuba, for a two weeks vacation.

Dr. O. V. Opheim, of Starbuck, Minn., has become assistant to Dr. Moe, in the Moe Hospital, of Sioux Falls, S. D.

Dr. Mary C. Ghostley, of International Falls, Minn., was elected president of the Upper Mississippi Valley Medical Society last week.

Dr. W. D. Jones, of Devils Lake, N. D., died on February 18, at the age of 68. An appreciation of Dr. Jones appears on another page.

The Deaconess Hospital of Brookings, S. D., will raise $10,000 by popular subscription to redecorate and refurnish the hospital building.

The General Hospital of Minneapolis has started a movement to collect bills from patients able to pay for the hospital services they have had.

Dr. C. C. Leck, of Austin, will erect a large two-story building for offices for himself and associates. Work on the building will begin at once.

The Supreme Court of North Dakota recently decided that dentists are equally responsible with physicians and surgeons for negligence in treating cases.

Dr. J. J. Kolars, a recent graduate of Creighton, who has spent several months in postgraduate work in Europe, has located at Le Sueur Center, Minn.

Dr. M. B. Hebeisen, of Carver, Minn., is taking an extended course of postgraduate work at Rochester, and will visit the Clinics of Chicago and the East.

New officers of the staff of the St. Joseph's Hospital, Minot, N. D., are the following: President, Dr. L. H. Kermott; vice-president, Dr. J. L. Devine; secretary, Dr. Martin Fardy.

The Ramsey County Medical Society is sponsoring a course of instruction for physicians in public speaking conducted by Professor Haldor Gislason of the University of Minnesota.

The new $2,000,000 hospital at St. Cloud conducted by the Sisters of the Order of St. Raphael was formally opened last month with religious services. Its capacity is over 300 beds.

The Woman's Auxiliary of the Hennepin County (Minneapolis) Medical Society will establish and maintain a library for the patients of the County Tuberculosis Sanatorium (Glen Lake).

Dr. Wilfred Grenfell, the noted Labrador physician, who lectured in St. Paul last month, made a long visit to the Children's Preventorium of St. Paul and was enthusiastic about its plan of work.

Dr. John W. MacKenzie, of Big Sandy, Mont., died last month at the age of 52. Dr. MacKenzie was a graduate of the Medical College of Indiana, and had practiced in Big Sandy for fifteen years.

The Eitel Hospital of Minneapolis will continue along the lines fixed in its work for many years. Mrs. Eitel will continue as Superintendent, and the Hospital will remain open to all reputable physicians.

Dr. W. G. Crandall, of Watertown, S. D., has resigned from the staff or the Bartron Hospital of that city and taken up general practice in Watertown. Dr. Crandall is a U. of M. Medical School graduate, class of '20.

Dr. H. A. Burns, of the U. S. Veterans' Hospital, at Ft. Snelling, has become Assistant Superintendent of the State Tuberculosis Hospital at Walker. Dr. J. E. Douglas, of the Sanatorium, goes to Webb City, Mo.

Dr. Andrew Sinamark, of Minot, N. D., returned the latter part of January after spending three months in postgraduate work in eye, ear, nose, and throat, at Vienna. He also attended the American Legion Convention at Paris.

Dr. George D. Eitel, a nephew of the late Dr. George G. Eitel and a member of the Eitel Hospital staff, has returned from doing special surgical work in Germany and Switzerland, and will at once resume his work in Minneapolis.

The North Dakota State Medical Association will hold its next annual meeting at Devils Lake, N. D., May 22, 23, and 24; and the South Dakota Association will hold its annual meeting on August 7, 8, and 9, at Hot Springs, S. D.

Physicians will find much of interest in the second annual meeting of the Child Health and Parent Education Conference to be held in St. Paul on March 27, 28, and 29. We expect to publish the full program of the Conference in our issue of March 15.

It is said that the freshman class of the Medical School of the University of South Dakota, at Vermillion, S. D., is the largest freshman class in the history of the School and has maintained the highest standing of work attained by freshmen. The class has twenty-six students, and the school 41 students.

The Alumni of the Medical School of the University of Minnesota are planning the greatest reunion and banquet ever held by them. The reunion will take place on June 12, during the meeting of the American Medical Association in Minneapolis. Dr. N. O. Pearce, of Minneapolis is Chairman of the banquet and reunion committee.

Dr. H. H. Kimball, of Minneapolis, is seeking for his lost album of early European surgeons, which has been freely loaned to libraries, clinics, and individuals until it has disappeared. We are asked to broadcast for its recovery. Dr. Kimball is a generous man and will give a suitable reward and "ask no questions" of the physician who will return it.

The Executive Committee of the Minnesota Public Health Association was named last month by the president of the Association, Dr. J. A. Myers. It is composed of the following members: Dr. H. Longstreet Taylor, St. Paul; Dr. W. A. Laidlow, St. Paul; Dr. O. E. Locken, Crookston; Dr. A. T. Laird, Duluth; Mr. A. E. Koenig, Minneapolis, and Mrs. J. A. Thabes, Brainerd.

Dr. Frank E. Clough, Chief Surgeon of the Homestake Mining Company of Lead, S. D., has resigned his position after the twenty-five years of medical and surgical service with that organization. Dr. Clough will locate in some South Dakota city. Dr. Clough has been an outstanding man in South Dakota for many years, and was president of the State Medical Association in 1923.

The Yellowstone Valley Medical Society (Billings, Mont.) is opposed to the position of Parent-Teachers' Association in the matter of public clinics for the examination of children of pre-school age. The doctors hold that such an examination should be made by the family physician, and where the parents cannot afford to pay for it the physicians will do the work without charge.

The Northwest sent two delegates and speakers to the annual convention of the International Society for Crippled Children, which met in Memphis last March. Mr. Paul H. Fesler, Supt. of the State University Hospital of Minnesota, and Mrs Harriett Campbell Jones, of Lisbon, N. D., Chairman of the Welfare Committee of the National Women's Relief Corps. They brought back the next Convention of the Society, which will be held in Minneapolis at the time of the dedication of the Eustis Hospital, in the summer.

An "open house" was held at St. Joseph's Hospital, Minot, N. D., on January 3, upon the completion of new additions to the hospital building. An additional floor was added to the main building that will increase the capacity of the hospital to 100 patients. The new floor includes a new obstetrical department, nursery, and additions to the surgical department, also a ward and private rooms. The nurses' home has also been remodeled and enlarged. It is now a four-story stucco building, with room for about forty persons.

Dr. Waldo N. Graves, of Webster, S. D., who spent three months abroad in research work and study, returned home on February 1, and assisted at the Peabody Clinic during Dr. P. D. Peabody's vacation in Cuba. Dr. Graves spent most of his time in Vienna while abroad, but spent a short time in Italy before returning to the United States. He had been associated with the Peabody Hospital for one year before going abroad and has returned for a few weeks until another doctor can be found to fill his place. Dr. Graves expects to settle permanently in Duluth, Minn.

Northwestern District Medical Society of North Dakota

A regular meeting was held at the Minot Elks' Club, January 31. This was planned as a social evening, and the usual scientific program was dispensed with. Dinner was served at 7.30, and this was followed by an informal dance. The evening's frivolity was enjoyed by all.

The following members with their ladies were present: Drs. Cameron, A. M. Carr, Devine, Erenfeld, Fardy, Halvorson, Knapp, McCannel, McGuire, Nestos, J. R. Pence, Sorenson, Sinamark, and Wheelon. Dr. E. R. Sampson was a guest.

During the dinner, a short business meeting was held, and officers for the year 1928 were elected as follows: President, Dr. Wheelon; vice-president, Dr. Fardy; Secretary-treasurer, Dr. Sinamark; censor, Dr. Kermott; delegates, Dr. Erenfeld, Dr. Carr, Sr.; alternates, Dr. Halvorson, Dr. Sorenson.

A number of invited guests were present for the dancing.

Andrew Sinamark, M.D.
Secretary-Treasurer

Kingsbury County (South Dakota) Medical Society

At the regular annual meeting of the Kingsbury County Medical Society held at DeSmet, on February 3, the annual report of the Secretary was read and approved and the following officers were elected for the coming year: President, Dr. H. B. Rae, Lake Preston; vice-president, Dr. G. V. Jamiesen, DeSmet; secretary-treasurer, Dr. C. P. Stockdale, Erwin; delegate to state association, Dr. Carl L. Fiege, Iroquois; board of censors, Dr. C. A. Butler, Lake Preston, S. D.

Resolutions of sympathy for the recent death of Dr. J. B. Dickey, Iroquois, a charter member of the Society and a pioneer practitioner of this state, were passed and sent to the family.

A round-table discussion was then held, after which a fine dinner was served by the ladies.

Attendance was very good, all but one member being present.

C. P. Stockdale, M.D.
Secretary

Substitute Work Wanted

An experienced physician is available at once to do substitute work. Address 456, care of this office.

High-Grade Stenographer Wants Work

A high-grade stenographer with four years experience in medical work desires a position. Can give best of references. Address 457 care of this office.

Apparatus for Sale

One Wappler *X*-ray Stand, and one Potter-Bucky Diaphragm (Engeln made). Both in good condition and reasonable in price. Address 454, care of this office.

Practice for Sale

In East Central South Dakota. Territory is 18 by 30 miles in extent. Five other towns without doctor in this territory. Practice runs from seven to ten thousand dollars yearly. Address 459, care of this office.

Microscope for Sale

An almost new Leitz scope in perfect order is offered at a bargain. Has two eye pieces and three objectives, including an oil-immersion. Address 449, care of this office.

Office Position in Minneapolis Wanted

By a woman of large experience in physicians' office. A high-grade stenographer and expert in history-taking, capable of managing a large clinic or a specialist's work. Satisfactory references given. Address 434, care of this office.

X-Ray and General Laboratory Work Wanted

A graduate laboratory and *x*-ray technician wishes a clinical or hospital position. Can do all routine laboratory work including blood chemistry, Wassermanns, and tissues. All general *x*-ray work including therapy, also am a graduate nurse. Best of references. Address 458, care of this office.

Position Wanted

Had three years practical training in general country practice, then graduated after a three-years course from a big hospital and was then over a year sole supervisor of a small hospital. Experience in *x*-ray work, laboratory, and giving anesthetics. Best of references. Ready to start at once. Middle West preferred, but will go anywhere. Address 448 care of this office.

FOR SALE

This property is located at 128 E. Franklin, cor. Stevens Ave., Minneapolis, on a large lot 100x128 ft.

The house is constructed of concrete and tile, faced with brick and stucco, and, except the roof, is entirely fireproof.

The first floor is artistic and well built. The second floor contains six sleeping rooms and three baths. The third floor has two sleeping rooms, a bath and a lárge open studio.

Full and well-equipped basement, steam plant with individual heat control in each room and seven fireplaces. There is a double heated garage.

The land is unincumbered as to zoning and is well and centrally located.

The house could be ideally utilized by physicians or others for offices, clinic, sanitarium, rest-home, nurses' home, club and many other purposes.

The price of this desirable property is only slightly above the value of the land alone.

WM. Y. CHUTE
738 McKnight Bldg., Minneapolis, Minn., Ma. 0872

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INTRA-OCULAR FOREIGN BODIES*

By W. E. Patterson, M.D.
Associate Professor in Ophthalmology and Otolaryngology, University of Minnesota Medical School
MINNEAPOLIS, MINNESOTA

A well-known author has aptly stated: "The presence of a foreign body within an eye converts every injury, be it ever so insignificant otherwise, into a serious lesion, which, in most cases entails destruction of the eye." The latter statement might better, perhaps, be taken with some degree of modification, it being possible, not only to preserve the eye in the greater percentage of these cases, but very frequently to restore serviceable vision.

The first problem to be settled in every case of a penetrating injury to an eye is whether or not there is a foreign body within. The history of the case frequently is of great assistance, and may in some instances be sufficient to prove or disprove that possibility. For example, if a man was hammering steel when the eye was injured, the presence of a foreign body in the eye would be extremely probable. Conversely, if he was struck with a screw-driver we would be justified in concluding that no foreign body was present.

Many times, however, the patient's description of the accident is very misleading, and if taken verbatim, may result in a wrong diagnosis. If you are told that the flying missile striking the eye was of too large size to have entered the eye, you could account for a laceration of the bulbar conjunctiva and not trouble to investigate the underlying sclera for a penetration. It is, I think, a common error on the part of the injured to believe the object striking the eye to be of larger size than it really was, probably due to the force of impact giving that sensation. Another patient may have been treated by a physician who removed a particle of metal from the outer tunics of the eye.

You might naturally suppose that if a foreign body was removed from the cornea there was no likelihood of there being another within the eye, both entering the same wound. That occurrence is not unlikely as it has been witnessed by the author. It happens, occasionally, that a scale of steel will break on striking the eye, a part remaining in the wound and a part passing on into the interior. Foreign bodies are of great variety, being in the majority of cases of metal. Glass and wood splinters, however, are quite frequently encountered.

For the consideration of their removal, metals are divided into magnetic and non-magnetic groups, and, fortunately, most metallic foreign bodies are of the magnetic variety. Of the non-magnetic variety copper seems to be the most common, and because of its irritating properties it is by far the most dangerous. The eye tolerates the presence of lead or glass better than other foreign materials, they being classed as the so-called "chemically indifferent foreign bodies." Wood splinters are especially dangerous, causing early suppuration. Iron is the least liable to carry infection, being frequently, if of small size, in a highly heated state and sterile when projected.

The point of entrance is of great prognostic

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importance. Penetrations at or near the limbus are the most dangerous, especially those involving the ciliary region, as they invariably produce a serious inflammatory reaction. A foreign body entering through the cornea and remaining in the anterior segment of the eye, obviously offers the best prognosis for removal or as regards subsequent infection. The crystalline lens tolerates the presence of foreign material better than do the other intraocular structures.

Hope for successful removal diminishes with the length of time that a foreign body has been in the eye, and without its removal, regardless of its nature, it will eventually cause serious trouble to its host and often a sympathetic ophthalmia in the fellow eye. So often has that fact been demonstrated that we should disregard the reports of cases where foreign bodies had been tenanted, in some instances for many years, before causing a serious reaction, and make the so-called "expectant treatment" a matter of past history. We might except a case where the other eye is blind, and the foreign body was of small size and in a location where its removal would be extremely hazardous; where the possibility of its causing trouble might be remote. Those possibilities, however, should never be regarded as probabilities, for the most innocent of foreign bodies are a very serious menace.

Oculists of considerable experience have often procrastinated too long in the removal of a foreign body where the eye retained a good degree of visual acuity, dreading to undertake so difficult a procedure as the "fishing out" of a small non-magnetic foreign body from the depths of the vitreous chamber. The result has been that an enucleation became necessary.

There is a feeling, ofttimes, that the hazards of the operation exceed those of the presence of the foreign body, especially where the delivery has to be made with forceps, which is a very dangerous procedure; but is it not better to incur that danger than to run the risk of losing both eyes?

Small foreign bodies are often projected with such force that the penetration is made without causing any appreciable degree of pain, and the wound made is sometimes scarcely discernable. This fact often causes its victim not to realize the seriousness of the injury, the result being a delay of treatment for days and sometimes months following the injury, when loss of vision due to degenerative changes or an inflammatory reaction, calls for an examination.

An intra-ocular foreign body is frequently overlooked in a case of a supposedly trivial injury; the first suspicion of its presence may be aroused by a change in the color of the iris due to siderosis, a cataract formation, or a degenerating vitreous. Such a case came to my attention a short time ago. A laborer was struck in the left eye with a piece of steel while calking a horse shoe. Very soon after the accident his family physician removed a piece of steel from the margin of the cornea. Seven months later he consulted me regarding loss of vision in the eye. That there must have been subsequently a severe iritis was indicated by a broad posterior synechia. A marked siderosis was proof positive of a ferruginous foreign body within. A roentgenogram showed a foreign body, 1 mm.x1.5 mm. in size, located close up behind the lens in the upper temporal quadrant. Through an incision 5 mm. back from the limbus, the piece of steel was easily removed with the magnet.

In this case the steel fragment must have split when it struck the cornea, a part remaining in the wound, the other piece passing through the ciliary region into the vitreous chamber as there was only one wound. He regained 20/30 vision.

No examination where there is a question as to the presence of a foreign body is ever complete without a roentgenogram, and in cases where a foreign body is evident a knowledge of the size and position is exceedingly important for its successful removal. The history will generally enable one to determine its quality.

Most foreign bodies are of such a nature as to give a shadow with the *x*-ray; even glass will, if it contains a high percentage of lead, but wood seldom shows unless painted.

All authorities concur as to the need of exact localization by the chart method before attempting a removal, unless the foreign body is so placed that it can be seen. Even when some part of a large foreign body is presented to view the size and exact position should be known to facilitate its extraction without undue laceration of the tissues.

The ophthalmoscope is seldom of much service in the location of a foreign body, because of cloudy media resulting from hemorrhage, exudate, or an opaque lens. Use of the magnet as a means of diagnosis for the presence of iron or steel is a very dangerous procedure, and should be deprecated as irreparable injury may be caused to the internal structures of the eye.

Route of removal.—The shortest possible course for the removal of the non-magnetic type of invaders should be followed, avoiding, if possible, the ciliary body or the entangling of the iris; and, I believe, that rule is just as applicable in the case of the magnetic type, although there exists some diversity of opinion as to the practicability of removing foreign bodies from the vitreous by the anterior route wherever possible, either by way of the suspensory ligament or through the lens. The writer has a great respect for the ciliary area, and unless the foreign body can be removed with a minimum amount of trauma to that very highly sensitive body, in all instances, where located in the vitreous, the scleral route is preferable. By this method it is possible to remove all magnetic foreign bodies, even to the millimeter sized variety, with a high percentage of good results.

Operative procedure.—The following will relate strictly to magnet cases. The patient is prepared as for any major eye operation, the face washed with soap and alcohol, and the eye irrigated with 1 to 5,000 solution of bichloride. The magnet is covered with sterile drapes, and all necessarily exposed parts are washed with alcohol. Two assistants are employed, one to help in the management of the magnet and the other in the manipulation of the eye. The recumbent position for the patient is preferable in all instances. He should be under complete control, aided by the use of sedatives if necessary. After cocainization, if the sclera is to be opened, a subconjunctival injection of novocaine and adrenalin over the area is very helpful in desensitization. A non-magnetic eye speculum and tissue forceps must be employed. For the scleral route the quadrant nearest the foreign body between the recti muscles is selected. A triangular incision is made through the conjunctiva of sufficient size to give a good exposure, and medium-sized silk sutures are inserted through the conjunctival flaps, to serve as retractors for the wound. The incision through the sclera should be no longer than is absolutely necessary, and made in the horizontal direction in order to avoid all the intra-ocular vessels possible and far enough back to avoid the ciliary area. A very sharp Graefe knife is used for this purpose. An incision three millimeters in length is generally ample for the smaller-sized foreign bodies, but occasionally it is advantageous to make a very short incision at right angles to the horizontal incision, but avoid the latter if possible.

A magnet point of large size is then applied to the opening in the sclera; the reostat is turned so as to make and break the current repeatedly for a number of times or until the foreign body appears in the wound. If the foreign body does not appear, a very small unattached magnet point is inserted through the wound to such a depth as is necessary to approximate the foreign body. After two or three applications of the current the magnet is slowly withdrawn, and it seldom happens that the foreign body is not adhering.

The small magnet tip referred to is one detached from a small hand magnet. It measures 2.5 cm. from tip to shoulder and about 2 mm. in average diameter; is sufficiently long to reach to the depth of any foreign body and not too long to exert a considerable pull. Great care must be exercised in holding the free point in order to avoid a side slap, when the current is applied. This danger can usually be averted by having the fixed magnet point in direct line with the one in the eye.

In the writer's experience the loss of vitreous has never been of any consequence and bleeding usually very slight, nor has he witnessed a retinal detachment resulting from contraction of the scleral scar. The above-mentioned complications though are all possibilities which cause some apprehension in all cases. In so small a scleral wound a hernia should not occur, and healing is usually very prompt. Rest in bed for a week following the operation is advisable and longer if there is any indication of a retinal detachment, hemorrhage, or infection.

Where the foreign body is located in the anterior segment of the eye it is often possible to negotiate its removal through the wound of entrance. This procedure, however, in some cases, would cause injury to the lens or entanglement in the iris, whereas a corneal incision nearer its location would facilitate its removal without that danger. A dose of hemostatic serum or thromboplastin, one hour before the operation, and antitetanic serum are very good prophylactic measures. Following, full doses of salicylates, preferably given by the intravenous method, sometimes supplemented with some form of protein therapy will often avert ciliary complications. The early eradication, where possible, of all foci of infection about the mouth or elsewhere should be brought about.

Blind eyes containing non-magnetic foreign bodies in the vitreous chamber, those with serious ciliary wounds, those suffering from infection and severe iridocyclitis are a constant menace to the possessor and should be enucleated. That advice may seem somewhat radical, but its rationale is conceded by most oculists, and the more the writer sees of that class of eye injuries the closer he tries to adhere to the above principle, having witnessed the development of several cases of sympathetic iridocyclitis where timely operation would have averted this most serious complication.

CASE REPORTS

Case 1.—Only recently I had occasion to see a case referred by the oculist, to by associate, Dr. J. A. Watson, for consultation and examination with the slit lamp. A foreign body in the left eye was suspected as a result of an injury of only two weeks before, from the breaking of a spectacle lens. A triangular piece of glass, partly obscured by corneal infiltration and a film of exudate, was located in the lower part of the anterior chamber. The glass was successfully removed, and a short period of improvement followed. Three weeks later the patient reappeared at our office for examination, and to our astonishment the worst had happened: he had a sympathetic ophthalmia in the other eye.

Case 2.—Another case is very fresh in my mind, but is not so recent. The patient, a country physician, consulted me regarding a very severely infected and mutilating injury, involving the ciliary region, of his right eye. Two weeks before the injury occurred from an accidental explosion of a shell in the open breech of a shot-gun. Immediate enucleation was advised by me, but counter advice to wait until the acuteness of the infection had subsided, by a general practitioner, who was an old-time friend of the patient, caused a delay of two weeks more, when a ciliary congestion and beginning loss of vision in the uninjured eye announced the beginning of a sympathetic ophthalmia. An enucleation was done without further delay, but too late to save the sympathizing eye.

Case 3.—That it is hopeless to expect an eye to tolerate even the smallest foreign body for any considerable length of time was again made evident by a case seen a few months ago at the University Hospital. On July 4 the patient, a boy of eight years, fired his "Big Bertha" in the form of a large dynamite cap. The result was an injury to his left hand and a small scleral wound about 3 mm. back from the limbus of the left eye. He was admitted to the hospital on July 11, when an *x*-ray examination revealed the presence of a foreign body of 1 mm. in size, 21 mm. back in the vitreous chamber. On account of the parents living in the country, and not knowing the seriousness of the eye injury, there were several days delay because of the correspondence necessary to explain the situation and get their consent for operation. During the interval the vision in the eye had improved to 20/30+, and the clearing of the media permitted an ophthalmoscopic examination, allowing the foreign body to be easily seen. Dreading to undertake the removal of so small a body by the forceps method, in the presence of a quiet, seeing eye, I made the mistake of espousing the "wachful-waiting" method with the intention of operating to remove the foreign body at the least show of any reaction. The eye remained quiet until August 20, when the vision dropped suddenly, the vitreous became very cloudy, a white suppurating mass appeared at the location of the metal, and ciliary inflammation rapidly developed. The time for attempting to remove the foreign body had passed. Without any further delay enucleation was submitted to.

THE PARKINSONIAN TYPE OF LETHARGIC ENCEPHALITIS*

By Julius Johnson, M.D.
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The Minneapolis Regional Office examined up to January, 1926, 2,099 neuropsychiatric cases. Out of these were 54 cases of epidemic encephalitis, and out of the latter, 20 cases were encephalitis with Parkinson's syndrome.

In line with the general policy of the Bureau of rating cases liberally these cases are given total-permanent rating for compensation and also receiving any available treatment, including out-patient relief. The Bureau feels that these extremely unfortunate young men are among the most deserving of cases.

The conception still prevails that the Parkinson's syndrome is one of the sequelæ of epidemic encephalitis. Considerable discussion can be found in the literature as to whether the disease first described by James Parkinson in 1817 and the Parkinson's syndrome following encephalitis may be the same disease and caused by the same underlying pathology. However, the question appears fairly well decided that the underlying cause and the pathological findings and symptoms are distinct and different.

Since epidemic encephalitis became prevalent in Europe and America during the war and the later years, the interest in the Parkinson's syndrome has attracted much attention by workers as well as writers and the literature has become constantly increasing. It will then be impossible to give even a comprehensive résumé of the subject in a brief paper.

Sequelæ following lethargic encephalitis depend on the area of the brain most affected and degree of restoration to normal of swollen and inflamed brain cells. The basal ganglia and midbrain appear to carry the brunt of attack by this protean disease. Just why the old brain should be attacked by this disease, apparently new to medical science, may give reason for speculation as to the actual time of origin of the filtrable virus, remembering that some races are comparatively immune to infections that have been prevalent among them for generations.

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*Presented before the Hennepin County Medical Society, at Minneapolis.

Different investigators, probably because of their manner of approach and technique, have located the prevalent lesion in the striate body; especially the globus pallidus involvement was considered the essential feature in the pathogenesis of the disease. The substantia nigra as the seat of the lesions had its proponents. It was, however, McKinley and Gowan who undertook a detailed evaluation in the quantitative amount of cell destruction in these regions that gave us a reliable source of information relative to this question. It may be well here to quote McKinley's conclusions relative to the pathology, as that appears to represent the most prevalent views at the present time.

1. "In two additional cases of postencephalitic paralysis agitans studied by ordinary histologic methods, minimal changes of the globus pallidus, but massive lesions of the substantia nigra, were found. Scattered lesions found in other parts of the brain were so insignificant as to require no intensive investigation."

2. "The two foregoing cases and a previously reported case have been studied by micrometric methods in order to evaluate quantitatively the amount of cell destruction in the lenticular region and the substantia nigra."

3. "Comparing with the normal cases, no decrease in the number of cells in the putamen of the globus pallidus can be demonstrated."

"An average decrease in the number of neurons, from 58 per cent to 87 per cent, has occurred in the substantia nigra in the three cases."

4. "From these data it appears that the syndrome of paralysis agitans may occur without a significant lesion in the globus pallidus, though this is not intended to mean that the globus pallidus never plays a part in Parkinsonism."

5. "The destruction in the substantia nigra seems to be the essential factor in the production of the syndrome, at least in three cases presented."

The contagiousness of epidemic encephalitis during its acute phase is a fact actually demonstrated from the authentic observations reported in the literature. However, the question of contagiousness of epidemic encephalitis in its Parkinsonian sphere may still be open to some question, and this question seems to be important from both a scientific and practical standpoint. The post-encephalitic Parkinsonism is not as may be thought the result of certain cicatricial lesions; it is produced by the lesions still performing evolutions where the virus still persists and it is not unusual to find in these Parkinsonians rises in temperature.

Gillain reports a case of a young man who had been hospitalized for many years and confined to bed because of paraplegia after an old polio. This patient was lying between two cases of Parkinsonism with the characteristic sialorrhea so commonly seen. In the ward there had been no acute cases of encephalitis. This patient was in the habit of making and lighting cigarettes for one of his neighbors as the latter had such stiffness in his upper extremities that he could not use them. After some time the patient, paralyzed by the old polio, developed an attack of acute encephalitis of the lethargic type and the typical ocular and cranial nerve involvement. From this it appears that we do not know yet when the virus ceases to live and function. Further evidence to substantiate this idea is that these chronic cases all progress, and furthermore some cases are known to improve, after the tremor and rigidity have been well established. A simple sequel of sclerosis would be less apt to undergo these changes.

A history of these cases reveals that there is usually a preceding illness which can be associated with the existing condition, though Burr reports a few cases where no such history could be ascertained. Not infrequently there is only a history of periods of either wakefulness or somnolence, perhaps a slight fever, a transient dizziness or sometimes a slight weakness with a transient diplopia, which was not recognized at the time as a mild encephalitis. The condition may develop in from a few months to two and two and one-half years after the primary disease. This Parkinsonian-like sequel is no respecter of age or sex, though the male is slightly more prone to the condition and younger people as to age. The outstanding feature is the rapidity with which the symptoms develop. A complete picture may develop in a few months after the primary disease.

The essential symptoms presented in most cases may be thus stated:

1. Immobility is especially marked in the face, which is fixed and expressionless. It is called the wax mask or ironed-out face. This immobility is found also in all the other parts of the

body. There is no longer visible those thousand little movements which are the personal expression of the individual personality as underlining the course of thought. To the expression of life has succeeded the fixed state of a waxen image.

2. The attitude is equally a fixed one and very characteristic. Generally the body is bent forwards, the neck sunk between the shoulders, the trunk stiff, the arms slightly flexed on the forearms with the hands brought towards the abdomen, the fingers flexed or extended. Other attitudes are met with such as an inclination to the right, left, backwards, or in torsion, but in all these attitudes one recognizes the fixed, stiff, or wooden attitudes.

3. Slowness of movements is the most important sign. That is why this syndrome is designated as bradykinetic by Cruchet. The expressions show a lack of spontaneity. This slowness in movement is shown in all the ordinary acts, such as eating, dressing, shaving, washing, etc., so that the time consumed in these acts is greatly lengthened. Then the beginning of the act is never sudden, and after the movement has once started there may be a sudden stop so it will take several seconds before the movement can be reinitiated.

4. The gait is of the festinating type, short steps with the body bent forwards. Sometimes these patients pass from a slow walk to running.

5. Loss of associated movements, especially noticed in the arms, face, and tongue.

6. Sialorrhea is marked in most cases and very troublesome because of the slowness of movement so that the hand makes futile attempts with the handkerchief to keep the clothing dry.

7. The tremor is less constant than in true paralysis agitans. This may be localized in the tongue, face, one hand, or both hands.

8. Speech is slow and monotonous. Psychic processes are slowed up, psychomotor retardation, easily fatigued, poor emotional control with varying degree of depression. Lack of interest in the surroundings, but no actual psychotic manifestations. Memory and intelligence fairly intact.

9. Tendon reflexes usually hyperactive.

10. Cranial nerve involvement involving the muscles of the eye, as well as the seventh, eighth, ninth, tenth, eleventh, and twelfth, as indicated by facial paralysis, impaired hearing and taste, difficulty in deglutition, and paralysis of the soft palate, larynx, and tongue.

11. A tendency to sleep at all hours, unless attention is held by external stimuli.

12. Diminished muscle power.

13. Headaches fairly frequent.

14. Reading is characteristic, beginning in the dull and monotonous voice, then a sudden stop at the end of the line as if unable to find the next line.

15. Acute swelling of the salivary glands, especially the parotid, without suppuration has been observed in several cases.

16. A peculiar tinge of salmon color to the skin is often observed.

The prognosis in these cases is very guarded. Some authors report complete recovery in isolated cases; others show improvement so that they may be able to resume their occupation. However, the larger percentage of cases gradually progress.

Treatment,—We have no specific treatment; therefore the problem before us is a patient, usually a young man or woman, presenting a condition at present thought incurable. Our efforts, then, resolve themselves into treating the patient with whatever physical and psychic means are at our command.

Among the drugs hyoscine hydrobromate has given the best result in controlling the tremor and possibly in lessening the rigidity. Atropin gives some result in controlling the sialorrhea. Then, after careful study of the patient, other physical conditions can be met as they develop. The establishment of a suitable environment with moral encouragement and positive suggestions may aid in making the business of living more agreeable for these unfortunate individuals.

Physiotherapy applied by experienced workers and careful muscle training offer a field for usefulness probably not yet fully appreciated.

CASE PRESENTATION

Patient. aged 37, single. Past personal and family history reveals nothing of importance. He entered the U. S. Army service September 2, 1918, and while at Ft. Sheridan had a severe cold, or influenza. In January, 1919, had an acute attack of epidemic encephalitis. He recovered slowly, but had residual of clonic contractions of the great toe. This subsided in two years. In July, 1922, began to have general tremor and muscle rigidity. Prior to this, in December, 1921, had an episode that he interpreted as a breakdown. During that time he was weak, confused, and unable to walk. Since July, 1922, patient has complained of nervousness and a miserable feeling, trouble in walking, gets confused and staggers, has a general tremor which is constant, excessive flow of saliva; eyes blink and want to stay shut; extreme general weaknes.

The neurological examination in this case reveals essentially the symptoms as outlined in the paper.

He is at present taking nine tablets of 1/100 grain hyoscine a day for the tremor. Also atropin occasionally for the sialorrhea. He takes physiotherapy treatment at the Bureau laboratory five times a week.

THE DIAGNOSIS OF INCIPIENT PULMONARY TUBERCULOSIS

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[We make editorial comment on this and the following papers.—The Editor.]

The diagnosis of incipient pulmonary tuberculosis is difficult or simple, according to one's viewpoint. The task is formidable if significance is attached to the innumerable refinements in diagnosis, including many of the physical signs, meticulous radiographic interpretations and questionable laboratory procedures. These refinements are difficult to appraise, are often misinterpreted, and to my mind are of negligible value in the recognition of the disease. On the other hand, the helpful aids in diagnosis are simple and readily mastered.

The term "incipient" or "minimal" tuberculosis means to me a lesion occupying an area not larger than that represented by the upper third of one lung. The lesion is not confluent but discrete, with intervening zones of healthy tissues, and in most instances is located in the upper part of the lung. The inflammation is chronic and spreads by continuity or by aspiration of infected material, rarely by means of the vascular channels. The lesion may heal without ever passing beyond the early stage, or progress so slowly that months or even years may elapse before the more advanced stages of the disease are reached.

According to my inquiries, incipient pulmonary tuberculosis occurs in general practice in less than one per cent of patients. Failure to detect the disease may be attributed in part to this fact. The age, but not the sex of the individual is relevant. The disease occurs at puberty and in the aged, but predominates among young adults, particularly those who have been intimately exposed to the disease. The relation of the patient's constitution to tuberculosis, although as yet imperfectly understood, probably is quite important. On the other hand, the influence of environment has been over-emphasized. In regard to occupations: silica inhaled in dust is the only substance so far known to be capable of inciting activity in a latent tuberculous lesion. The administration of anesthetics, trauma, parturition, and exposure to severe weather at times have a similar effect.

The health record of tuberculous patients is often excellent. Previous diseases rarely are responsible for the activation of a latent tuberculous focus. Diabetes mellitus is probably the one exception. Chronic adenitis, chronic otitis media, and ischiorectal abscess are common complications of pulmonary tuberculosis and suggest its presence.

The symptoms aroused by an incipient lesion vary considerably with the constitution of the individual and the nature of the lesion. In a few instances the health is apparently unimpaired throughout the course of the disease; in others the symptoms are severe, but in the large majority they are mild.

Symptoms may be conveniently divided into two groups: the general, or extrapulmonary, and the local or pulmonary.

GENERAL SYMPTOMS

Lassitude is one of the most frequent and in many ways the most important of the general symptoms. The patient begins the day's work refreshed, but during the afternoon and evening feels unaccountably listless, and this may continue for months before the appearance of the other symptoms. Nervous irritability, vasomotor disturbances, insomnia and indefinite muscular pains may be associated with the lassitude.

Nutrition. One of the conspicuous and misleading features of the disease is the healthy appearance of the patient. In approximately half of the patients the loss of weight is negligible, while in the others the loss rarely represents more than ten per cent of the body weight. Noticeable loss of weight may be attributed frequently to associated digestive disturbances. Anorexia, nausea, and other functional gastrointestinal derangements are not uncommon. They may be the first manifestations and persist throughout the course of the disease.

Sweating is an inconstant factor and generally occurs during the hours of sleep. It is usually not profuse and is confined for the most part to the chest and abdomen.

Elevation of temperature is a cardinal and common symptom. Although the temperature curve is not characteristic, a slight, persistent, unexplained rise of temperature in the afternoon, ranging between 99.4° and 100° by mouth is an important diagnostic lead. The elevation of temperature may occur for only a few hours during the day and demands frequent temperature readings, preferably at 10 A. M. and at 3, 5, and 8 P. M. A reliable thermometer is a requisite.

It is well to remember that this symptom often is not recognized by the patient or physician because the slight elevation of temperature does not cause the flushing of the cheeks or otherwise inconvenience the patient.

The *pulse rate* is normal in many; when accelerated the rate is usually 90-100, seldom above 110. At times it may be increased, and the temperature remain normal. The pulse rhythm is not disturbed and the blood pressure readings are without definite diagnostic significance.

LOCAL SYMPTOMS

Cough is regarded by the laity, and at times by the physician, as the most outspoken symptom of the disease. This holds true for the disease in the advanced, but not in the incipient, stage. In the latter the absence of cough is by no means unusual. When present it is generally slight and hacking in character, but may be severe. One must determine whether this symptom is due to some condition in the upper respiratory tract or to the pulmonary lesion. Its origin may be assumed to be pulmonary if the history indicates that the cough dates from the onset of the illness or became aggravated at that time.

The *expectoration* when present is mucoid or mucopurulent, never offensive, and varies in amount from one to four teaspoonfuls a day. Large amounts of purulent sputum speak for the more advanced stages of the disease. In approximately 75 per cent of early cases tubercle bacilli are absent from the sputum.

Hemoptysis.—Pulmonary hemoptysis is unquestionably the most significant of the local symptoms. The amount of the hemorrhages varies from a few drams to several ounces. Copious hemorrhages speak for the more advanced stages. Pulmonary hemoptysis is not a pathognomonic symptom because it is common to many other pulmonary diseases, notably fusospirochetal infections. The expectoration of a small amount of blood, a teaspoonful or less, must be cautiously interpreted, because of the difficulty in determining its origin: whether from the upper or lower respiratory tract.

Hoarseness.—Some patients are noticeably hoarse or complain of transient huskiness of the voice, particularly after prolonged conversation. If the laryngoscopic examination is negative, then the huskiness is probably due to fatigue of the throat muscles. In others, the huskiness is persistent and the larynx may be diffusely injected or unduly pale. However, a localized tuberculosis of the larynx in early disease is rarely encountered.

Pleuritic pain is a common complaint. It may be agonizing, but more often is dull aching in nature. It is unilateral in distribution and for the most part confined to the base of the chest. When the pain is the initial symptom it may be mistaken for intercostal neuralgia.

The symptoms in early tuberculosis are important because frequently they offer the first clue to the diagnosis. Although occasionally severe, they are generally so mild that they are required to be elicited by the physician. In some patients the general symptoms are manifest and the local are in abeyance. Here procrastination in diagnosis often occurs until the local symptoms appear. In others, the symptoms are entirely local and quickly arouse suspicion as to the nature of the disease. However, in the majority of patients both the local and general symptoms are evident. The marked symptoms occurring with advanced disease: pronounced fever, drenching night sweats, urgent dyspnea, etc., require no mention here. The problem then is one for the therapeutist and not for the diagnostician.

It is to be remembered that some or all of the symptoms here enumerated occur in a wide variety of other conditions. However, if they remain unexplained for two months or longer the possibility of tuberculosis should again be considered.

PHYSICAL SIGNS

In text-books on physical diagnosis, one is told that the signs in incipient disease deviate but slightly from those that obtain in health. The description of the normal lung signs is but casual or entirely omitted, probably because it is presumed that the reader is already familiar with them. For some years I have studied the physical signs of the normal chest and I am convinced from these observations that the slight deviations referred to in the text books as valuable in diagnosis are not an expression of the disease, but simply variations of the normal signs. My studies, particularly of the supraclavicular depressions (1) and breath sound changes (2), apparently support this view.

Râle.— This is the only sign which cannot be confused with the normal signs because it is an extraneous sound, and herein lies its preëminent value in diagnosis. Râles can be heard in 90 per cent of cases in the early stage of the disease. In 25 per cent they are heard on quiet or forced breathing, while in 75 per cent they remain latent until the patient is directed to cough. The marked increase in the intrapulmonic pressure associated with cough, by ventilating the atelectatic areas of the lung, produces râles which are otherwise not heard. The patient should be directed to cough forcibly and toward the end of the expiratory phase.

Among the innumerable physicial signs advanced as aids in the diagnosis of incipient tuberculosis, the râle is the only one to be relied upon. It possesses greater significance than all the other signs combined, and the diagnosis of pulmonary tuberculosis is justified by the detection on several examinations of persistent latent râles confined to the summit of the chest.

The *x*-ray may prove of invaluable aid when the diagnosis is in doubt. Fluoroscopic examination visualizes the movements of the chest and contained viscera, but is inferior to the chest radiogram for revealing evidence of disease. The radiogram is merely a study of lights and shadows, and its interpretation, contrary to accepted opinion, is quite simple. If one is familiar with the location of the light and dark zones of the normal chest radiogram, the diseased areas in the lung are readily recognized. A light zone occupying the place of a normal dark zone invariably means a pathological density of the lung in this area. Consequently, such light zones, confined to the upper portion of the lung field, are presumptive evidence of pulmonary tuberculosis because the summit of the lung is the site of election in this disease. There are other pulmonary diseases which cast a localized shadow at the summit of the lung, but they are rare and do not offer much difficulty in differential diagnosis.

LABORATORY

Tuberculin test.—A positive tuberculin test indicates the presence of a tuberculous focus somewhere in the body. It does not, however, differentiate the small encapsulated or healed focus without clinical significance from the progressive type of lesion associated with symptoms. Little importance, therefore, can be attached to the tuberculin test except in those very rare instances where the tuberculin produces demonstrable focal reaction in the lung. Conversely, tuberculosis may be ruled out if the test is persistently negative.

Complement fixation test.—The results with this test obtained to date by various observers are confusing, and thus far a positive reaction like the tuberculin test, has not proved serviceable in differentiating clinical from non-clinical tuberculosis.

The examination of the blood, the urine, and the feces is of questionable value.

The sputum.—The detection of tubercle bacilli in pulmonary sputum is the one certain criterion in diagnosis. When the tuberculous disease is confined to the base of the lung, the sputum examination becomes of first importance. The physical and radiographic examinations, so helpful in the recognition of the disease at the summit of the lung, are of secondary importance in basal lesions. Therefore, it is difficult to explain the frequent omission of the sputum examination. The sputum should be examined by the ordinary and the concentration methods and when these are repeatedly negative, animal inoculation should be resorted to.

SUSPECTING TUBERCULOSIS

By John B. Hawes, 2nd, M.D.
BOSTON, MASSACHUSETTS

I shall base what I have to say in this paper on the following statements of what I believe to be facts:

1. The early diagnosis of tuberculosis is a subject of grave importance.
2. Early diagnosis depends on education of the medical profession and of the general public.
3. Education of the medical profession at best is difficult because:
    - A. The subject is given scant and inadequate attention in our medical schools.
    - B. The unwillingness on the part of our general hospitals to admit patients with pulmonary tuberculosis for purposes of diagnosis and teaching.
    - C. The general practitioner is an extremely busy and always an overworked man.
    - D. The inherent dislike on the part of any

physician "to make himself unpopular," which often leads to disguising the real truth.

4. Education of the general public to at least "suspect tuberculosis" will bring about the best results.
5. Constitutional signs and symptoms, especially "ease of tire" and "undue fatigue" should be given special emphasis in bringing this subject to the attention of the public.

The early diagnosis of pulmonary tuberculosis is an old and time-worn subject and yet one of the very greatest importance. Despite the tremendous reduction in the mortality from this disease during the past twenty-five years the fact remains that the number of deaths from tuberculosis, especially among young adults, is still far higher than it should be, and patients all over the country are reaching the advanced stages of this disease before a diagnosis is made. The arrest of tuberculous disease and its reduced mortality depend largely upon early diagnosis which, in turn, is based upon education,—education of the medical profession and education of the general public. Gradually, I am coming to the conclusion that it is by educating the public rather than the doctors that further progress will be made. At the present time there is a striking tendency in our medical schools to devote overmuch time to scientific, pathological, chemical, and physiological studies at the expense, I fear, of the more practical and clinical subjects. The result is that tuberculosis and its early diagnosis receives scant attention. Our schools are turning out men who are intended to be teachers and investigators rather than general practitioners, but it is *the general practitioner* who sees and will see consumptives in the early stages. I hope before long to see the pendulum swing in the opposite direction. In addition to this the majority of our general hospitals still refuse to admit cases of tuberculosis into their wards. I would like to broadcast all over this country the words of Dr. Henry A. Christian, of the Peter Bent Brigham Hospital in Boston, who, at a recent medical meeting, stated in no uncertain terms his belief that tuberculosis in all its forms should be accepted into the general wards of our hospitals or, better still, that a ward be set apart for this purpose so that medical students and internes would have some opportunity, now practically denied them, to learn at first hand something about tuberculosis. Dr. David Stewart, of the Ninette Sanatorium, of Manitoba, despite the fact that the nearest medical center is over 200 miles away, throughout the year has a large number of medical students and practitioners constantly living at his sanatorium to learn something about the tuberculosis problem.

Lack of time on the part of the general practitioner is another difficulty in arriving at early diagnosis. The average general practitioner is an overworked man, continually in a hurry. He has to get in from 20 to 30 calls a day, often at the expense of eating and sleeping and resting. He has to rush through his office hours in order to make his evening visits and it is not to be wondered, therefore, that he sometimes overlooks the early signs and symptoms of tuberculosis. Another obstacle in our path, and a very human one, is that many doctors are unwilling to make themselves unpopular and are often unwilling to tell patients the whole truth. They salve their own conscience and carry the patient along with such phrases as "you have a little spot on your lungs," "your lungs are a trifle weak," "your lungs are slightly affected," or worse still, deliberately lie to the patient and say that he has an acute bronchitis or something else equally innocuous.

For these reasons, particularly until our students are taught something about the subject, I feel that we shall make more progress by devoting most of our energies to educating the general public. It was recently my privilege to review a small book by Dr. John Potts, of Texas. Its title, "Getting Well and Staying Well," interested me greatly, especially that of the first chapter, "Suspecting Tuberculosis," which might be read with profit, not only by the general public, but by the general practitioner.

How are we going to teach the general public to suspect tuberculosis? First and foremost this should be done by the medical profession. It is a very real and definite duty on the part of every general practitioner to emphasize the fact that the normal condition of the human body is one of health, and that any deviation from this, no matter how slight, should be investigated. If doctors would only explain to their patients whom they see for coughs, colds, grippes, etc., that the chief reason that they are sick is because they have not played the game squarely and because they have broken some of the rules of right living, there would be less sickness and less tuberculosis. The physician's duty is not merely confined to giving tablets of aspirin, castor oil, etc. He should see to it that the patient understands why he is sick and what he should do to prevent its happening again. This simply means explaining and emphasizing the rules of health and hygiene.

The next most important agency in teaching the general public how to suspect tuberculosis is the tuberculosis association. A properly run preventorium is an educational center for the public of the very highesttvalue. Each of our children is followed up into the home after discharge, where both the child and the parents are taught the fundamentals of health and hygiene and how to keep well, while in addition to this the Health Crusade in schools, and informal talks to young men and women of all kinds in factories, stores, and elsewhere on the early symptoms of tuberculosis and on how to keep well are of the greatest importance.

The third agency in teaching tuberculosis should be state and local boards of health and education. They have a splendid opportunity to teach right living to children and adults. In Massachusetts there is a statute that I personally drew up to the effect that tuberculosis *and its prevention* shall be taught in those grades of our public schools in which physiology and hygiene are taught.

What are the particular signs and symptoms we should emphasize both to physicians and to the public as being most important in the early recognition of tuberculosis? The great majority of persons, I feel, would answer that it is the local signs and symptoms related to the lungs, such as cough, sputum, raising of blood, pain, etc. I do not agree with this. While we certainly should impress the fact that blood-spitting means tuberculosis until the contrary is proved; that a pleurisy, wet or dry, should be considered as highly suspicious of tuberculosis and that any cough lasting over six weeks requires careful investigation, it is the *constitutional signs and symptoms* which should be given the greatest emphasis. The most important of these, and likewise the most intangible, is *chronic fatigue, undue fatigue,* or *ease of tire.* If we could only learn the importance of this, if we would only learn to be honest with ourselves and recognize when we are going on our nerve and would not fool ourselves as we are so apt to do, tuberculosis would be recognized far earlier than it is at the present time. I am constantly seeing patients for a cough that has lasted a few weeks, or for recent blood-spitting. This is what they come to me for. When I tell them they have tuberculosis, often they admit that they had been utterly exhausted and had gone on their nerve for months prior to the advent of the cough or other chest symptoms. If these patients had known enough to consult a physician for this chronic fatigue and loss of strength many lives would have been saved. The other constitutional symptoms, fever, rapid pulse, loss of weight, loss of appetite, sweating, etc., are of minor importance.

I would summarize my feelings in regard to the diagnosis of early pulmonary tuberculosis as follows:

First, despite the general reduction in mortality the number of deaths from tuberculosis, or particularly among young adults, is still alarmingly high.

Second, instruction of medical students in the general subject of tuberculosis, and especially its early diagnosis, is either lacking altogether or woefully deficient in our leading medical schools. Every effort should be made to persuade general hospitals to accept tuberculous patients in their wards or to have a separate ward for such cases for purposes of teaching medical students and nurses.

Third, education of the general public should be carried on in regard to the early symptoms of tuberculosis through the medical profession, tuberculosis associations and municipal and state departments of health.

Fourth, of all the symptoms of early tuberculosis, *chronic fatigue, undue fatigue, ease of tire and loss of strength* are the most important. It should, of course, be made clear, so that everyone will know that a hemorrhage from the lungs amounting to at least a teaspoonful of clear blood means tuberculosis; that a pleurisy, wet or dry, is strongly suspicious of tuberculosis, and that any coughing or spitting lasting more than six weeks requires thorough investigation.

WHY NOT ALL LIVE 100 YEARS?

By C. F. Dight, M.D.
President Minnesota Eugenics Society; Formerly a Professor of Physiology
MINNEAPOLIS, MINNESOTA

There is reason to believe that eighty or ninety years may soon be the average life of man, secured through better sanitation and observance of the laws of health.

An isolated mass of cells from a young chick has been kept alive and functioning now for

18 years at the Carnegie Institute in Washington, by keeping them in a fluid of the right reaction and which affords proper food, warmth, and oxygen to the cells with removal from them of carbon dioxide gas and other waste matter which their functioning produces. It seems that under the right conditions constantly maintained these cells may live 100 years, perhaps several hundred.

The cells of our bodies are less favorably situated for long life, in that some of them are very sure, sooner or later, to be impaired by accident, disease, or abuse inflicted on them, and their breakdown or enfeebled action therefrom harms the whole human machinery, and a too early death ensues. Even without these exiggencies of human life which shorten it, the cells of our bodies, as they grow old, lose their early elasticity, they come to contain less water, become more dense, less pliable, and function with less ease, and must ultimately die in mass, but not so soon as is common to-day if proper care were taken to obey the laws of life.

But, as it is, longevity has been extended from about 33 years to about 53 in the last two generations. This has been accomplished largely by securing a purer and therefore better water, milk, and other food supply, better housing and removal of sewage, less contact with disease-producing germs and with communicable diseases, in other words, by greater cleanliness both environmental and personal.

Yet if in these respects man's environment and his behavior were ideal he would be constantly subjected to a cause of early death. It is the continuous bombardment of his cells by invisible particles of matter and electric or magnetic waves. Every student of physics has heard of how the atoms of hydrogen gas inclosed in a bell glass or in a rubber bag bombard the inside walls of the receptacle. When you apply alcohol to your surface or take it internally, some of it quickly permeates your skin or mucous membrane and the underlying tissues, because of its great volatility, and in doing so it bombards the cells and keeps on doing it until it is oxidized or excreted. This is true of ether, of chloroform and of carbon dioxide gas which is produced naturally in every cell, and of hydrogen sulphide gas and ammonia which are often produced in the alimentary canal and which must bombard our cells terrifically. To show how this must be so, fill a glass half full of hydrogen sulphide water and stretch over its open mouth a hog's bladder or parchment paper. You will not only get the odor of the gas as the molecules bombard their way through the cell covering, but a strip of white paper moistened with a solution of lead acetate will be blackened (the test for the gas) if held near the covering, showing that the gas comes through.

About one and one-half pounds of carbon dioxide gas are produced daily in the average human body most of which bombards its way out of our bodies, chiefly through the lungs, and about one pound of oxygen gas from the air bombards itself into the body daily. We call it absorption and diffusion but it is a bombarding process.

Then our bodies are constantly shot through and through—bombarded—by radio or electric waves. This altogether perhaps brings on the commonly observed fibrosis and interstitial thickening of tissues and the natural senile conditions of old age, and which must forever make man's life a brief one at best on earth.

Some persons stand up under this bombardment and other adverse conditions much longer than do others. It is due to a good heredity, their cells possessing superior quality and resisting power. They are the people of great longevity, of good fibre, the wiry type. In this respect they are good human stock. Marriage of the long lived with the long lived would create a long lived race of men and women, and if with this only those of good mentality mated and the obviously unfit were prevented from reproducing it would soon give us a wholly worth while race. It is the only way to secure a people sound in body, mind and morals. With such and a good environment acute diseases that could not be prevented would be less fatal, vice and crime would largely disappear and this would become practically a sinless world. To get it is man's biggest job, yet it would be but little more difficult than has been the production of better plants and lower animals.

"Today we think of the better breed,
Of cattle, hogs, sheep and the dashing steed,
Tomorrow we'll think of how careless we've been,
In delaying so long the improvement of men."

THE RELATION OF THE MEDICAL PROFESSION TO THE INSURANCE CARRIER WITH PARTICULAR REFERENCE TO THE MATTER OF FEES*

By Kenneth Bulkey, M.D.
MINNEAPOLIS, MINNESOTA

Gentlemen of the Hennepin County Medical Society:

I address my remarks to you rather than to you and your President, inasmuch as I have something to say of him and a number of things I think of him which I will not say; because, for some unexplained reason, he has laid upon my shoulders the burden of broaching to you probably the most unpleasant part of this month's symposium, namely, the relation of the profession to the insurance carrier, particularly as that relation bears upon the subject of the physician's fee. What grudge our good President, whom up to this time I considered a personal friend, has to settle with me I do not know, but, if he has a grudge against me, I call you all to witness that he has here and now fully settled it. I shall try not again to excite his enmity. What few remarks I shall make I trust none of you will take as personal. I shall speak but briefly, hoping that the time I do not utilize will be far better occupied in the general discussion, which, if it does nothing else, will relieve some of us of long pent up feelings which have but awaited interminably the opportunity for public expression. I hold no brief for either side, but shall attempt to present impartially the viewpoint of both the physician and the insurance carrier's agent, who signs so many of our welcome checks. I must ask you all, if for illustration I use some case with which you are familiar, not to consider the matter personal, but allow me to use it simply as illustrating a point. My remarks shall apply both to compensation and public liability cases.

Let us first consider some eventualities, both from the viewpoint of the physician and the insurance carrier. The honest physician,—and the vast majority of physicians are honest, desires that his patient shall be restored to normal health and usefulness at the earliest possible moment. If a patient, let us say a self-supporting farmer, for example, having dependents and a moderate income, and not covered by insurance, recovers satisfactorily, from the physician's viewpoint, in a certain period of time, it is quite certain that the physician will, both for the sake of the man's own welfare, physical and psychological, and for the sake of his own fee and reputation for quick cure, urge that patient to resume his occupation and become a producer at the termination of that time. The patient returns to work, possibly with still some slight or moderate discomfort, but with a stiff upper lip; he becomes a booster for the doctor who so efficiently returned him to work; the doctor's reputation becomes enhanced among the patient's friends and associates; and the doctor gets his fee sooner and more surely. Furthermore, the doctor has the satisfaction of a job well done, not only physically, but in his psychological handling of that patient. That, I believe, is the normal attitude of the normal physician toward the normal patient. The physician's charges against this patient will depend upon the usual factors, namely, the amount of time devoted, the services rendered, and the social status of the patient. Moreover, the physician, if he has the patient's interest at heart, will not see that patient, either at his home or at his office, more frequently than is necessary. Nor will he exaggerate the patient's ills or his possibility of future difficulty. Frankly, gentlemen, I hate the alarmist, and the more I see of him the more am I convinced that he acts from motives of self-interest rather than in the interest of his patients.

We have been speaking, let me remind you, of the patient incapacitated by accident and not covered by insurance. When in such a case the physician places the charges on his books personally against that patient, he knows that there is roughly a 20 per cent chance that he will never collect one penny for the services he has rendered, or for the time he has expended. And let me again emphasize that he has kept his charges, having the best interests of his patient at heart, at the minimum. This case has been handled fairly, honestly, and satisfactorily to both patient and physician. It is the ideal case from the viewpoint of everyone concerned.

But what so often happens if this same person, a person with the same income, the same dependents, of the same social status, but covered by some sort of insurance, meets with an accident? I do not know what the psychology of the average doctor is, but I am convinced that almost invariably it is not based on dishonesty. But somehow or other expenses for this patient rapidly multiply. He may be hospitalized, where, were he not covered by insurance, he would not be. Well enough. I have yet to encounter an insurance carrier who does not gladly agree to hospitalization if thought best by the physician. *X*-rays are taken. Well and good, and so say most of the carriers—(there are a few exceptions). But many *x*-rays are made which if the patient were standing the expense would not be taken. And frequently these are made only at the insistence of the patient, often in curiosity, he knowing that his employer or insurer will foot the bill.

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*Presented before the Hennepin County Medical Society, April 27, 1927.

In due course of time this case reaches the point previously mentioned, when the physician, were not insurance involved, would advise this patient to go to work. But the patient demurs. He points out that he still has some amount of discomfort. So the doctor rather laxly suggests that some form of electricity might diminish that discomfort, and incidently increase his own charges, and that the patient should not attempt to return to work. And again the expenses pile up against the insurer, not only in the bill of the doctor, but particularly in the time lost to the employee. Gentlemen, I do not know whether you appreciate, in compensation cases, what this experience has been with practically every insurer throughout the United States. I have it on good authority that not a company in the country but has lost money on compensation in the last few years, not because of what they have paid to us or to hospitals, but because of the compensation they have been compelled to pay the employees; and a goodly percentage of this lost time of employees can be laid at your door and mine, because we have not assumed the proper attitude to our patient of this class and returned him to work more quickly.

I cannot but feel that our American of to-day has not as much red blood as formerly. What if a man does have some pain or stiffness? If this is not actually disabling I believe he should return to work. Why should he not? If he were not carried by insurance he would. That he does not, is your fault not mine. We exaggerate or he does, and we agree with him or he agrees with us. And the end-result is that he loses his self-respect and decent wages and becomes a semi-pauper, and we (honestly or dishonestly) pad our accounts. We must learn to appreciate that the Compensation Act of this State and other states is not a pension act. Gentlemen, if we continue in the folly of our ways we will but hasten the time when there will not be an insurance company willing to write compensation insurance; and our various State compensation acts will become null and void, unless some sort of State insurance or State medicine be instituted. When this occurs, or whether it occurs, as it practically has in England and Germany, is going to depend on your attitude and mine in regard to this type of work. I feel quite certain that none of us wish to see this state of affairs reached.

I do not wish to take up much more of your time. I presume I have already sufficiently stirred up a hornet's nest, and why I have not been hissed already by some of you I do not know. But let me cite just a few recent personal instances as illustrating four points at which the medical profession and the insurance carriers are at variance, namely, the undue prolongation by the physician of the patient's disability; the instilling in the patient's mind of the alarmist's attitude; the assumption of effects from questionable causes; and the unwarranted overcharging and padding of physicians' bills. You see I am being quite frank. I shall not touch on the subject of certain highly questionable medicolegal testimony offered in this city, certain examples of which are probably familiar to many of us, and a type of testimony which, I might add, is beginning to be recognized as questionable, not only by our courts but by juries.

To cite characteristic examples: I have recently seen a boy, who twenty-three months ago received a minor compression fracture of the first lumbar vertebra without cord injury. There is a family history of diabetes and obesity. Following the injury diabetes was first discovered. He has been paid compensation for twenty-three months. His family physician certifies that his diabetes is due to his injury. His back is long since well. Is the family physician honest? I leave it to any of you. A permanent total disability is claimed on this boy because of his diabetes. He should have been paid for from six to twelve months for his back, and the company was willing to so pay. Beyond that they certainly were not liable. This is a typical example of undue prolongation of disability and unfair, if not dishonest, assumption of cause and effect on the part of the physician.

A mechanic sprains a finger. It is absolutely nothing else. It is an injury every self-respecting

American boy who plays baseball gets and for which he is not paid compensation. *X*-rays are negative. There is no question of a torn tendon. The patient is of the type who has had ten different employers in two years and probably one or two police records. Were he footing his own bill the doctor would tell him to forget his finger and go to work. But he is covered by the State Compensation Act, and both he and the doctor know it; and what happens? He is treated with violet-rays daily or by some other form of electricity for a period of a month, and the carrier is stung, not only for a month's compensation to the patient which probably comes to about $80.00, but for another $60.00 worth of unjustified doctor's bill. In other words, $140.00 is added to the sum total of your insurance and mine. Can you not see how hard feeling and friction are developed in such a case? This is not an exceptional case. I have seen many similar.

And then the question of the alarmist. It is not a dream. It is all too true. To protect his own ignorance, the physician only too often says, "Let's wait and see what develops." He has too much of a tendency to try to cover himself. Example: A child runs behind an automobile, is knocked down, and sustains a typical basal fracture with rupture of one drum and free hemorrhage from the canal. It makes a perfect recovery. Two weeks later, except for some slight irritability, the child is normal. The physician has inadvertently made some reference to the parents in regard to Jacksonian epilepsy. They relay it to their ambulance-chasing attorney. He in turn brings back the phrase to the family physician, and he, to cover himself, sticks to his guns. What happens? The case cannot be settled for what it is worth, namely, all expenses (and please do not forget that your bill and mine are included in these), plus a reasonable amount extra. Oh no, this child in the future may develop a Jacksonian epilepsy, and the case is worth well up into the thousands. Did any of you ever see a Jacksonian epilepsy develop after a basal fracture which never had intracranial pressure? Of course you did not, and neither did any member of any other County Medical Society. But the doctor must stick to his guns, and some gullible jury, with the help of crooked medical testimony, will eventually give the family a large verdict—and with what result? Again, only the inevitable one, that your insurance and mine, based on experience, will steadily and rapidly increase in rate until it is prohibitive.

And then, lastly, the padding of physicians' bills. It is an unpleasant question, but we are, as the French say, "en famille" to-day, so let's be frank. We all know that this padding does occur. I do not mean to intimate that charges are made for calls which are not made, but we all know that many unnecessary calls are made, either by the physician or by the patient to the physician at the latter's behest. I suppose they are made, in the main, not because of any dishonesty on the part of the physician, but because the physician presupposes that the patient wants attention. But, after all, is that not a question of the education of the public? Why should we ask a patient with a sprained finger or ankle to report to us daily, the result of that call being that we take a fleeting look at the ankle or wiggle the finger and tell the patient to report again the following day. Is there anything accomplished for the patient? Manifestly, no, and certainly nothing for us except a better filled waiting room and a bit more ink on the office ledger. But, men, in principle it is often done. Let's stop it! Let's see our patients when we need to for the patients' good and not more often. I know we would be happier, and, with just a little education combined with a generous mixture of psychology, I know the patients would be too.

Many of you will, undoubtedly, long before now, be saying that my brief is for the insurance companies. It is not. Their representatives have had their innings in this symposium, and have had their opportunity to point out their own faults. My friends, our President, has, as I said at first, asked me to point out ours, and I have tried to do so impartially. Where I have failed I most sincerely hope will be brought out in the discussion. And might I add that I hope this discussion will not descend to personalities or cases, but consider the questions at large and the principles involved.

I know that many of you are criticizing me severely for what I have said. But I have done a large amount of insurance work for a number of different companies over a period of seventeen years, and, with a few outstanding and rare exceptions, my experience has been that they try to, and do, play the game straight. Some of you are undoubtedly of the impression that the insurance companies are, to use the vernacular, hard-boiled. Maybe they are, but if they are it is your fault and mine, not theirs. They are willing to pay legitimately for legitimate claims, but until our profession, in both compensation and liability cases, can be either persuaded to see, or forced to see, the wisdom of straight shooting both in our treatment (particularly psychological) of these cases, and in our testimony before a Compensation Board or Court, the policy of insurance companies will continue to be hard-boiled. And not only will this attitude on their part continue, but the cost of all forms of insurance, as I have before stated, will continue to rise for you and me and for our families.

Gentlemen, I beg of you all to shoot straight in handling these cases. Do not pad your bills. Remember you have 100 per cent collections. Do not be an alarmist. In so acting you are unconsciously dishonest to yourselves, and by lessening your patient's self-respect you do him harm. Do not keep the wage-earner from his job longer than necessary. Just because you are guaranteed your money do not deter him from earning all of which he is capable.

THE PROGRAM OF THE SECOND NORTHWEST CONFERENCE FOR CHILD HEALTH AND PARENT EDUCATION

By Richard Olding Beard, M.D.
Executive Secretary of the Conference

The program of The Second Northwest Conference for Child Health and Parent Education compares very favorably with the First. At certain points it is superior to it.

In the building up of such a program it becomes increasingly evident that the demand for speakers in this field is in advance of the supply. And this does not appear at all strange when one considers, first, that child study, as a subject of research, and, second, parent education as a conscious demand among the people, are of very recent development.

With the spread of this movement, it becomes also increasingly clear that parent education is the necessary corollary of child study; that the only medium by which the product of child study may be grafted into the actual life of the child to its own betterment is the parent or, in degree of her vicarious relationship, the foster parent or teacher of the child. Much of the meaning of the parent-teacher bond of to-day is to be found in this relationship.

And another outgrowth of the present-day pursuit of child study is the gathering appreciation of the fact that physical, mental, emotional, moral, and social development in the human subject are inter-relational, and that no real understanding of child nature is achieved saving through the clear appreciation of this fact.

So it is that Conference programs in this field seek to encompass the child in all his parts, But we have to go a step farther than this: It is the normal child,—the child of positive health,—who is to be the principal subject of study. This is a somewhat novel conception, to which the students of physical health and its disturbances of the past have not readily adjusted themselves. They still think in terms of health repair, rather than in terms of health preservation and promotion. So it is, again, that the type of program this sort of Conference develops is a novel one. It stresses the idea and development of the well child. It takes cognizance of disease in order to its prevention and to the amelioration of its results. It strives to envelop even the disabled in the atmosphere of health.

Some of the salient features of this program are of interest to note. It opens on Tuesday, March 27th, at 9:30 A. M., in the Saint Paul Auditorium, with an address upon "The Child of Health," by Dr. James T. Christison, who is easily the Dean of the Science of Pediatrics in the northwest.

Dr. Caroline Hedger, of the Elizabeth Mc Cormick Memorial, follows with a discussion of "The Need for Continuous Health Supervision of the Child." Then Dr. Frederic W. Schlutz, Chief of the Department of Pediatrics at the University of Minnesota, presents "The Present Possibilities of Immunization against Contagious Disease,"—the liberation of the child from some of its immemorial foes to health.

Then follows a laboratory study of "The Nutrition of the Child," the anchor and hope of its health preservation, the subject being covered in an address by Dr. Amy L. Daniels, of the University of Iowa, and discussed by Drs. O. W. Rowe, Edgar J. Huenekens, and Woodard Colby.

Next, Dr. M. L. Stiffler, of the Saint Paul Child Guidance Clinic, considers "The Adjustment of the Child with Special Abilities and Disabilities"; and Dr. H. E. Chamberlain, Director of the Minneapolis Child Guidance Clinic, the too often neglected "Child of Superior Intelligence."

On the evening of Tuesday, March 27th, in the Auditorium, at eight o'clock,—the first General Meeting, an address will be given by Dr. Edwin D. Starbuck, Director of the Character Research Institute of the University of Iowa, upon "Childhood and Race Progress."

At this point there is something of a shift to the social and communal side of the child problem, with Mrs. Eva Morse, Director of Home-Making Education, in Omaha, making an address on behalf of "The Family Council"; and Mrs. Blanche La Du, of the Minnesota State Board of Control, presenting "Home Plans for The Community Adjustment of Girls."

With the morning session of March 28th, the program again turns to the problems of individual child development. "The Psychology of the Unusual Child" is the opening topic; with Carleton Washburne, Superintendent of the Winnetka Public Schools, giving an address on "Character Education," to which subject the Chicago Conference of last month devoted its entire program; and then Dr. Dwight E. Minnich, of the University of Minnesota, addressing the Conference upon the question of "Heredity and Child Development."

At one of the luncheon round-tables of this day, Dr. Caroline Hedger again speaks, and now upon the subject of "Health Habits," being followed in the discussion by Dr. T. L. Birnberg and Dr. George K. Hagaman.

At the second round-table a symposium upon "The Prevention and Amelioration of Handicaps in the Child" is to be presented. From this social viewpoint, Drs. C. C. Chatterton and Wallace H. Cole discuss "Structural Handicaps"; Dr. Horace Newhart, "Impairment of Hearing"; Dr. Hendrie W. Grant the matter of "Visual Defects"; and Dr. W. Ray Shannon, "Heart Handicaps."

A rather unique feature is added to the Wednesday program,—a luncheon for men, in the main dining room of The Saint Paul Athletic Club, at which Dr. Edwin D. Starbuck, Director of the Character Research Institute of the University of Iowa, will speak upon "Paternal Education," or the part the father should play in the upbringing of the child.

At the afternoon session, Dr. William A. Burnham, of Clark University, Worcester, Massachusetts, a veteran in child study, will give an address upon "The Child's Ego and His Mental Health." He is followed by Mrs. Sidonie M. Gruenberg, Director of the Child Study Association of America, in an address entitled "How Parents Establish Standards and Ideals."

At the general meeting of Wednesday, March 28th, at eight o'clock in the Auditorium, Mr. Charles H. Johnson, Director of The Department of Charities of the State of New York, is to be the speaker of the evening. He will give an address upon "The Adjustment of the Youth of Today."

On Thursday morning, March 29th, the program is again devoted to youth. The subject of "The Sex Education of the Child" will be presented by Dr. George W. Friedrich, of the State Teacher's College at St. Cloud; "The Adjustment of the Family to the Demands of Present Day Community Life," by Dr. Chloe Owings, Director of the Social Hygiene Bureau of the University of Minnesota; and "Problems of the Modern Adolescent," by Mrs. Gladys Hoagland Groves, of the University of North Carolina.

At the luncheon round-tables of Thursday, March 29th, the program again strikes the communal point of view. At one of these sessions, Mrs. Sidonie M. Gruenberg will present a study of "What a Community Can Do in Parental Education."

The second round-table takes up a symposium of "Problems in the Prevention of Tuberculosis in the Young Child." The problems to be presented are "Tuberculosis and Marriage," by Dr. Arthur T. Laird, of Nopeming Sanatorium; "Tuberculosis and Parentage," by Dr. Frank L. Jennings of the Glen Lake Sanatorium; "Tuberculosis and Breast-Feeding," by Dr. Everett K. Geer, of Saint Paul and of Pokegama Sanatorium, and "Tuberculosis and Family Exposure," by Dr. Jay Arthur Myers, of the University of Minnesota.

On the afternoon of Thursday, March 29th, Dr. Lois Hayden Meek, the Educational Secretary of The Association of University Women, Washington, D. C., speaks upon "The Understanding and Enjoyment of the Child"; and Professor Donald G. Paterson, of the Department of Psychology, University of Minnesota, upon "Education and Vocational Guidance for Modern Youth."

The banquet will occur on this final evening, at 6:30, in the Palm Room of the Saint Paul Hotel. Mr. Charles H. Johnson, Director of the Department of Charities of the State of New York, will give an after-dinner address upon "The Influence of Youth in the Community."

THE
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The Official Journal of the
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The Hennepin County Medical Society
The Soo Railway Surgical Association
and The Sioux Valley Medical Association

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A PROPHECY

Perhaps the writer is rashly expressing his views on the situation that exists, as it does, at the present time in medical circles, but he has heard so much gloom and so many expressions of dissatisfaction that he feels something ought to be said about it, perhaps there "ought to be a law about it." The more we talk of these disheartening things that occur every day the more we feel the same tendency to fall into line with the depressive statements that are often made. As a matter of fact, there has been a depression in medical practice, and we sometimes think it is purely a local affair, but it probably covers a very wide area,—it is not in Minneapolis or St. Paul alone, but over the entire state and over the entire country that we hear the same tales of the lightening of the load in medicine. Yet we are all feeling sorry for ourselves about it. Of course there are a few exceptions. There are a few men who are able to carry on their business very well, but even they are meeting with more or less destruction in practice, and for this reason the writer feels the time has come now to boost one another, not necessarily to boost ourselves individually, but to see that our work is done properly and that our patients are well cared for; and the impression will get around soon that we are not as bad as we thought we were. Even if general business has slowed up a bit, there have been very few failures, and so far we have not heard of a doctor going into bankruptcy. It is said there is a great deal of tightening up in the hospital situations in the Twin Cities, that the hospital population has diminished considerably. Naturally reverses occur, and from various causes. It may be the people are holding on to their money, thinking they cannot afford to go into a hospital for care and treatment. But when it comes to a situation that is more or less critical they do not hesitate, and further than that they pay their bills. If the hospitals of Minneapolis and St. Paul were closed entirely for a short time they would open very quickly because the demand for attention and care would come without question. The states of Minnesota and North and South Dakota are more or less interested because they have begun a campaign of construction in hospital work. A very large hospital has been erected in St. Cloud which will take its quota of patrons. Other hospitals are being erected in the state of Minnesota and in South Dakota particularly which will divert more or less practice from one place to another, as is always the case. Then, too, there has been a general feeling of dissatisfaction among the people—why, no one knows definitely; but the people of the state are being educated in medical matters to such an extent that they think they know as much as the doctor, and they may feel that a nearby hospital is more easily reached and that they will get, and probably do get, the same results.

This tendency to pessimism among the medical profession is a very serious one in spite of the fact that a few of the doctors have suffered more or less. One of our widely known men spoke in Minneapolis at the annual meeting of the Hennepin County Medical Society and gave it as his opinion that the only way to collect bills was to be a little "hard-boiled" and demand that your services be paid for. He found in his experience that the more he pressed the matter, the more he brought it to a distinct issue, the better the people paid. They simply had been holding back, perhaps fearing some dire calamity or dire illness or something of that sort.

Fortunately in some of the hospitals in Minneapolis and St. Paul the work has gone on without any hesitancy. The hospitals have been full, some of them have been obliged to turn patients away, temporarily at least. There are many evidences that we can see now and analyze more clearly that show medicine is coming back into its own, in spite of the belief of the people that they know almost as much as the doctors do. Perhaps, too, it does not hurt the practitioner to suffer a little inconvenience himself once in a while. He has been living at a very high speed, he drives his automobile as if he owned the town or at least, like the practitioner of olden days, he rushes from place to place as if he was the busiest man in the city,—but he is simply putting up a bluff and he will settle down to what is reasonable and right because he is obliged to.

What we must do first is to create a better feeling in the profession, a stronger feeling of confidence in our fellow-man, and not give way to unhappiness over the fact that he is not able to refer as many patients as might be expected. Instead of referring them he may keep them to treat himself because he thinks he needs the income. Then, too, the Government has been rather unreasonable about some things in regard to doctors, for instance, their attendance at medical meetings. In former years and with all other professions, an allowance was made for the doctor as to expenses incurred by him in attending the meetings or his special societies or the American Medical Association, that is, the amount that he spent was deductible from his income tax; but through some ruling in Washington he was temporarily cut off from that. Now Congress is attempting to readjust matters and put him back on the same footing as other professional men enjoy. So we have not reached the age of complete pessimism or discouragement yet. We ought to carry on just as we did before, whether our incomes have increased or continued or have been temporarily decreased. The writer feels very confident that it will not be long before the general business of the country will pick up, and we shall be on the same footing as we were before, contented; and perhaps we shall have profited by our experience in reducing our expenses, our methods of living, and our methods of enjoyment. We are really members of "The Great American Band-Wagon," referred to editorially in one of our late issues, and we must take the consequences, whatever they may be, until our complete readjustment to a situation is well outlined.

THE METHODS OF THE COURT

A recent exposition of the crime wave has developed in the East through a woman murderess being advised by her attorneys to plead guilty to the crime of murdering her husband with a clawhammer in order to escape a death sentence. Her attorneys probably further advised her that in pleading guilty she would be eligible to parole in ten years although the judge sentenced her for life. This seems like a curious miscarriage of justice, considering that the former Mrs. Snyder was electrocuted for the killing of her husband, in which another man was associated with her. It is rather remarkable that these two people did not plead insanity as a defense. But if they had pleaded guilty to being a pair of damn fools it would have been much nearer the truth. These people evidently knew what they were doing. They certainly knew the difference between right and wrong, but the careless habit of murdering which people are getting into in some of our states is leading to a very difficult situation in a very intense problem. No one seems to care very much. Even the newspaper accounts of the affairs are looked upon with greater or lesser indifference, and the crime of murder still goes on. The writer ventures to believe that if the points in these criminals' lives were carefully looked into it would be found that they were people of ordinary but sufficient intelligence to know they should not commit a crime of this sort,—simply yielding to this impulse without any effort to control it, or perhaps depending on the knowledge that they will escape paying the penalty they take a chance. Why? What do they get out of it? A few years in prison, and then they are out. They are probably not able to reform much, in their later years, in spite of the specific attitude of the reformers who think that after a time these people should be safe for society. As a matter of fact, from a medical point of view, the quicker these people are eliminated from society and the sooner society is protected the more speedily will these crimes cease.

One of these women, Velma West, after murdering her husband tied the feet of his lifeless body, stuffed a gag in his mouth, and then deliberately changed her blood-stained garments and dressed and drove to a bridge party that her husband had not wanted her to go to. Not only that, she took a roll of music with her as she was to sing at the party, and it was said that she did her best and enjoyed herself, remaining over night, and was apprehended the next day. We should say that Velma was "hard-boiled," but although she thought she could get away with her crime successfully she showed a spirit of indifference, and she was really "careless."

In Ohio they have a very severe penalty for murder. They electrocute people after they have been proved guilty. But to escape this possibility the client clears herself, in a way, by declaring herself guilty and consequently escapes this extremely unpleasant effort on the part of the State to weed out its worst citizens. Of course this will not stop the average run of illiterates or uneducated or indifferent people from perpetrating crimes. They will go on and acquire all the publicity they can, just for a little while, pay a small penalty, and then come out again and follow their own inclinations. The problem of knowing what to do with this class of people is growing more and more difficult, as is the problem of knowing what to do with the feeble-minded who are looked upon as averaging from 40 to 95 per cent of the population. What are we going to do with them? The unconfined feeble-minded in the state of Minnesota number approximately 800. Out of this number 271 feeble-minded are denied care here. It is said there are 104 of this class in Minneapolis alone, and there is no place to put them. And it is perfectly astounding to learn that there are cases of such incompetents detained in houses, who are either kept in close confinement or fastened to the furniture; they are not only of the feeble-minded type but many belong in the psychiatric hospital. The Welfare Board in Hennepin County are wondering what to do with these people. They have not buildings enough in which to care for them, and there are not enough institutions in the state to care for them; and not all who are in need of institutional care are known in the cities.

The writer knows of a family consisting of a mother and four children, one or two of the latter grown to manhood, who have been suffering from a psychotic condition. Two of them are chained to their beds. Two of them are left or secluded in the house because the mother is unwilling to separate herself from them. What an absurdity! What a disgrace to any city or to any family to let such conditions exist. But if we are going to confine all of the subnormals in state institutions it will take a lot of money for the erection of buildings and the employment of operatives.

The so-called moron, who is a little under the average and yet not sufficiently feeble-minded to be looked upon as an institutional case, probably constitutes a greater part of our low-grade population. But these people are sufficiently bright to keep out of confinement and are frequently unrecognized because no one is constantly looking for a moron. There are enough here without looking for them! These individuals are excused from many delinquencies because of ordinary circumstances or perhaps because they are protected or detained. They form a large proportion of the people who are constantly in litigation. They are unrecognized as defectives, but they are recognized as cranks or pests, or known as people of so-called low social standards.

This little clipping is added to emphasize a point, and the reader will take it as he pleases:

"Lucky is the moron,
Happy as a clam.
I only wish I were one.
Good Lord, perhaps I am." —Anon.

THE NORTHWEST CONFERENCE FOR CHILD HEALTH AND PARENT EDUCATION

The officers and the executive secretary of the Northwest Conference for Child Health and Parent Education, meeting in Saint Paul on March 27, 28, and 29, are most anxious to secure the support and attendance of physicians, and especially of those of the Twin Cities, at the sessions of the Conference.

The program presents subject material of exceptional interest and a group of speakers of exceptional power. It is a novel one, as many such conference programs are nowadays. It has to be, for it suggests the results of comparatively recent study,—it promotes a new educational project. Its objective of child betterment is conditioned upon its recognition of the fact that it is dealing with a new child, born into a relatively new world, acted upon by, and reacting to, a multitude of influences, growing up into a new environment, in a new home, a new school, a new community—all new to a degree unrealized in any previous generation.

The whole complex calls for new knowledge, new understanding, new treatment, new guidance; for the building up of new standards and ideals. It may be that it calls for a new emphasis upon the practice of modern medicine, for a new attitude upon the part of medical educators who should be among the best interpreters of health to the parents of the children.

DOCTOR JOHN GROSVENOR CROSS

Dr. John Grosvenor Cross died on March third at the Abbott Hospital, from cerebral hemorrhage, at the age of fifty-seven. He was sick about nine days.

Dr. Cross was one of the good men of Minneapolis. He was a good friend always and a delightful man to chat with, and he was full of a very broad sense of good humor. To those who knew the family, and his father particularly, he is a type of the real practitioner; he took a special personal interest in his patients, and he stayed by them until they were well.

The editor has the keenest regard for Dr. Cross' professional work, as he was very closely associated with the family of the writer. His patients were numerous, and they looked upon him with confidence and friendliness. He was a scholar, a well-educated man, and wrote a number of delightful papers on his specialty, that of internal medicine. He was very careful in his work; he made very extensive and thorough examinations and in that way satisfied his patients. He was not constantly thinking of the patient's disease, either; he thought of the patient as an individual who incidentally had a disorder of some kind, and this added greatly to his popularity.

Dr. Cross was born in Rochester, Minnesota, May 8, 1870, the son of Dr. and Mrs. E. C. Cross, pioneer residents, who came to Minnesota in 1858. His preliminary education was received in the public schools of Rochester, and later he graduated from the University of Minnesota, in 1892, and still later he attended the Northwestern University Medical School, in Chicago. Following his graduation he returned to Rochester for seven years, and after that studied approximately two years in Vienna. In 1904 he moved to Minneapolis, and after a very short time he became prominently identified with the medical profession here. He occupied many positions in medicine. He was president of the Hennepin County Medical Society at one time and was a member of its committees. He was president of the Academy of Medicine, an interurban association, and at one time was associated with the College of Medicine of the University of Minnesota for a few years. He was formerly chief of the medical division at the Minneapolis General Hospital. He was also associated with the staffs of Abbott Hospital, Hillcrest Hospital and St. Mary's Hospital. He was the usual man at the Minneapolis Club and a member of the Nu Sigma Nu and the Chi Si fraternities, and a member of the Six o'Clock Club. He was also actively identified with St. Mark's Church.

In 1893 Dr. Cross was married to Frances Montgomery, and he left behind him his wife and two sons, Grosvenor and Roderic, and a daughter, Miss Louise Cross, an artist, also two sisters, Miss Anna Cross and Mrs. F. C. Van Dusen, all of Minneapolis.

The funeral services were held on Tuesday, March sixth, at the residence, 424 Ridgewood Avenue, and the burial was in Rochester.

The medical men were great admirers of Dr. Cross and his work and of his methods as a practitioner. He was the type of man who makes the practice of medicine hard for himself in that he was a man who took his profession very seriously and devoted almost too much time to some of his work, not taking sufficient time off for relaxation except for the time spent in his summer home on the North Shore of Lake Superior, where he went for a few weeks each summer—but he went back and forth from there to look after his practice, consequently he wore himself out more rapidly than usual, and he should have been spared to us for a longer time.

THE EARLY DIAGNOSIS OF TUBERCULOSIS

The month of March, 1928, will be a memorable one in the history of the nation-wide fight against tuberculosis, for in this month all the mediums of reaching public attention are engaged under the auspices of the National Tuberculosis Association in an effort to bring to the people the necessity of early diagnosis of tuberculosis. Medical journals, medical societies, public clubs of every description, radio broadcasting stations, and scores of other means of reaching the public have been enlisted.

In compliance with a request the Journal-Lancet is publishing in this issue two papers by distinguished specialists on the subject: Dr. H. A. Bray, Medical Superintendent of the New York State Hospital for Incipient Pulmonary Tuberculosis at Ray Brook, N. Y., and Dr. John B. Hawes, tuberculosis specialist of Boston, Mass., and author of well-known books on the subject.

BOOK NOTICES

Nutrition and Diet in Health and Disease. By James S. McLester, Professor of Medicine at the University of Alabama, Birmingham, Alabama. Philadelphia and London: W. B. Saunders Company, 1927.

This is an extremely well-written book on diet. It considers the subject entirely from the viewpoint of the general physician.

The book is divided into three parts. The first part discusses "Nutrition in Health," considering metabolism, digestion, and absorption, nutritional factors, and a consideration of the various types of foods. There is also a chapter on the diet of school children, one on the feeding of infants, and another on diet and reproduction.

The chapter on the feeding of infants was contributed by Dr. McKim Marriott.

The second part, "Nutrition in Disease," is a discussion of the various diseases and the proper dietary treatment. The work of Murphy and Minot on "Liver Feeding" is given in its entirety. In all of the diseases, complete lists of diets are given, making them readily useable for the physician.

Part three is taken up with tables and charts of a general nature.

The entire book is one that should be read by everyone interested in the dietary treatment of disease.

—A. Cardle, M.D.

Affections of the Stomach. By Burrill B. Crohn, M.D., Associate Attending Physician to the Mt. Sinai Hospital, New York City. Octavo of 902 pages with 361 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $10.00 net.

The author's idea has been to portray the subject of diseases of the stomach and the associated conditions from the viewpoint of laboratory workers in pathological physiology, as well as that of the clinician. New data on gastric secretion and secretory disturbances, the rapid strides of roentgenology and of cholecystography, and gastric surgery have been included with a large bibliography.

With regard to medical treatment of gastroduodenal ulcer, the author uses a modified Sippy regimen with definitely less alkali than in the original.

—C. A. McKinlay, M.D.

The Human Body in Pictures: A visual test of anatomy, phyiology and embryology. By Jacob Sarnoff, M.D., associate surgeon, United Israel-Zion hospital; consulting surgeon, infants home. With foreword by John Osborn Polak, M.D. With 190 original illustrations, mostly from dissections and animated drawings by the author. Physicians and Surgeons Book Co. Brooklyn, N. Y., 1927.

The author describes the development, structure and functions of the human body in a concise manner and attempts to visualize them by motion picture films and drawings.

The matter is presented in a form best suited to teaching physiology and anatomy to high school students.

The author is to be commended for recognizing the need of education of the student concerning the human body, which phase of instruction is sadly underdeveloped in our public school system.

—C. A. McKinlay, M.D.

A Text-book of Medical Diagnosis. By James M. Anders, M.D., Professor of Medicine, Medico-Chirurgical College, Graduate School of Medicine, University of Pennsylvania; and L. Napoleon Boston, M.D., Associate Professor of Medicine, Graduate School of Medicine, University of Pennsylvania. Third edition, entirely reset. Octavo of 1422 pages, 555 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company, 1925. Cloth, $12.00 net.

This volume containing 555 illustrations is one of the most valuable and useful contributions in the field of medical diagnosis. The authors begin with certain important general considerations and words of advice. They emphasize the importance of understanding the biological principles underlying the various phenomena of disease. They warn against hasty generalizations, emphasizing that final conclusions cannot be arrived at without a complete analysis of all available data from clinical and laboratory sources. They point out the importance of adopting early a definite system and routine of examination.

The general plan of the previous editions has been retained, but the discussion of diagnostic methods has been brought up to date. As in previous editions useful diagnostic tables are frequently presented, which are of great assistance in differential diagnosis. The various diseases are taken up in detail and under each disease are given the data, clinical and laboratory, which may be of value in diagnosis. Although the laboratory and other methods are given proper weight, the authors especially emphasize the simpler methods of diagnosis and state that any attempt to replace a thorough history and careful systematic examination by laboratory findings of whatever nature is to be strenuously deprecated.

One is left with the definite impression after reading upon any disease that this book is the result of prolonged years of keen and careful bedside observation which has been carefully rechecked by repeated investigation.

—M. H. Nathanson, M.D.

NEWS ITEMS

Dr. H. A. Crecilius has moved from Volkin, S. D., to Lakeport, Calif.

Dr. J. F. Schefcik, of Minneapolis, will spend the remainder of the winter in Florida.

Dr. Harold W. Riggs, of Armour, S. D., has sold his practice to Dr. Boyd, of Corsica.

Dr. C. P. Nelson has moved from Minneapolis to Owatonna, where he formerly practiced.

Dr. J. A. Barker, of Hot Springs, S. D., has moved to the National Soldiers' Home, Maine.

Dr. E. E. White, Government physician, at Red Lake, Minn., has been transferred to Kansas.

Dr. T. C. Kellogg, of Mankato, was elected county physician of Blue Earth County last week to succeed Dr. Wm. Black.

Dr. J. F. Quinn, of Gregory, S. D., and Dr. James Threadgold, formerly of Lead, S. D., have moved to Belle Fourche, S. D.

Dr. John G. Cross, of Minneapolis, died on March 3. A notice of his life and work will be found in our editorial columns.

Dr. Clifford C. Henry, of Minneapolis, attended the meeting of the American College of physicians in New Orleans last week.

Dr. Dallas Burton Phemister, of Chicago, gave a paper on "Bone Sarcoma" before the Minneapolis Surgical Society last week.

The Minnesota State Board of Examiners for Nurses will hold examinations on April 12, 13, and 14 at St. Paul, Duluth, Rochester, and Crookston.

Dr. Edward O. Vollum, of Albert Lea, died last month at the age of 48. Dr. Vollum was a graduate of the Medical School of the University of Iowa, class of '08.

Dr. C. E. Proshek, of Minneapolis, has been appointed consul for Minnesota, North Dakota, and Montana by the Czecho-Slovakian Republic. The Consular office is in the Builder's Exchange, Minneapolis.

Dr. F. L. Webber, of St. Paul, has been appointed Police Surgeon of St. Paul. Dr. Webber is a graduate of the Medical School of the U. of M., and took his internship at Ancker Hospital.

Bound volumes of The Journal-Lancet for the years 1911 and 1917 are missing from the files of the Hennepin County (Minneapolis) Medical Society, and their return is earnestly requested.

Dr. R. B. Fleeger has been appointed head surgeon of the Homestake Mining Company Hospital, at Lead, S. D., to succeed Dr. J. E. Clough, recently resigned. Dr. Fleeger has been on the staff of the Hospital since 1915.

After the consolidation of the Cuyuna Range and Miners' Hospitals at Crosby last month the Cuyuna Range Clinic was organized at Crosby and is composed of Drs. B. A. Smith, F. A. Allen, S. S. Shannon, and Dr. Pollard.

The physicians of Montana, Wyoming, and Idaho will hold a joint meeting in Yellowstone Park on August 27, 28, and 29. It will be largely a meeting for pleasure and for forming acquaintances. Men of national reputation will be invited to present papers at the meeting.

Dr. H. H. Freeburg, County Superintendent of Health, at Watertown, S. D., told the Parent and Teachers Association of that city that the cost of a county nurse would increase the county tax levy only twenty-five cents per quarter section (160 acres) of land. Is it worth it?

The Yellowstone Valley Medical Society, of Montana, will hold a clinical conference in Billings, Mont., on March 22, and a general invitation is extended to Montana physicians to attend. The committee on invitations is composed of Drs. Balsam, Nelson, and Richards, of Billings.

Columbia University of New York has made another draft on Minnesota dentists. After taking Drs. Owre and Rowe, of Minneapolis, it has called Dr. H. A. Young, who was on the dental staff of the University of Minnesota in 1921-22 and then practiced two years in Wabasso.

Dr. P. C. Davison, of Willmar, Minn., died in Florida last week at the age of 56. He had gone to Florida in January on account of failing health. Dr. Davison was a graduate of the Minneapolis College of Physicians and Surgeons, class of '04, and had practiced in Willmar for a dozen or more years.

The Minnesota State Board of Medical Examiners are better equipped than ever before to enforce the medical practice acts of the State, and a vigorous campaign against offenders is under way, with means at the Board's disposal to employ competent inspectors so that ample evidence can be obtained to make the way of offenders very hard.

Dr. George H. Overholt, of Kenyon, Minn., died last month at the age of 86. Dr. Overholt graduated from the Albany (N. Y.) medical College, class of '66, and was the first physician to practice medicine in Kenyon. He took part in the capture of the famous James-Younger gang who raided Northfield and rendered first-aid to their wounded.

Dr. Ora C. Strickler, of New Ulm, Minn., died on Monday, March 12, at the age of 65. Dr. Strickler was a graduate of the University of Michigan, class of '85, and had practiced at New Ulm since graduation. He was at one time president of the Minnesota State Board of Medical Examiners and a member of the Board of Regents of the State University.

The Upper Mississippi Valley Medical Society of Minnesota elected the following officers at its annual meeting last month: President, Dr. Mary C. Ghostley, International Falls; first vice-president, Dr. A. T. Agnew, International Falls; second vice-president, Dr. Paul Kenyon, Wadena; secretary-treasurer, Dr. G. I. Badeaux; delegates Drs. Einar Johnson, Bemidji, and M. P. Gerber, Brainerd.

The Women's Auxiliary of the Hennepin County Medical Society will have strenuous work on their hands in connection with the meeting of the A. M. A. in Minneapolis this year. The new officers for the year are the following: President, Mrs. H. B. Sweetser; first vice-president, Mrs. Martin Nortland; second vice-president, Mrs. A. E. Hedback; auditor, Mrs. Martin Aune, all of Minneapolis.

Dr. Carl W. Waldron, Professor of Oral Hygiene and Pathology and Oral Surgery in the University of Minnesota, was invited by the Winnipeg Dental Society last month to present a paper on "Diseases and Tumors of the Mouth and Jaw." He showed the extensive pathologic exhibit of the Division of Oral Pathology of the College of Dentistry of the University of Minnesota. Dr. Waldron was in the Canadian service during the World War and organized the Service for Injuries of the Face and Jaw, in 1916, and continued until he came to Minneapolis. He is a graduate in both medicine and dentistry.

Stutzman County Medical Society of North Dakota

The last meeting of the Stutsman County Medical Society was held in Jamestown, N. D., on March 5, 1928, at the Knights of Columbus Hall. The meeting was preceded by a dinner.

Dr. W. A. Fansler, of Minneapolis, addressed the Society on the subject, "Non-Malignant Tumors of the Rectum" and illustrated his talk with lantern slides.

The following members were present: Drs. H. M. Berg, D. W. Johnson, Joseph Sorkness, W. R. Winn, A. J. Lang, W. C. Nolte, W. A. Gerrish, F. O. Woodward, G. H. Holt, W. W. Wood, of Jamestown; Dr. F. F. Lang, of Montpelier; Dr. W. E. Longstreth, of Kensal; Drs. F. Peake and H. K. Wink, also of Jamestown; Dr. G. D. Todd, of Medina; and Dr. G. S. Carpenter, of Pingree.

The following guests were present: Drs. L. C. Anderson and C. J. Reardon, of Jamestown; Drs. C. E. Spicer, F. L. Wicks, S. A. Zimmerman, E. A. Pray, Crosby, and W. H. Moore, of Valley City.

Dr. Guest was appointed to take charge of the historical work of the Society.

H. M. Berg, M.D.
Secretary

X-Ray and General Laboratory Work Wanted

A graduate laboratory and *x*-ray technician wishes a clinical or hospital position. Can do all routine laboratory work including blood chemistry, Wassermanns, and tissues. All general *x*-ray work including therapy, also am a graduate nurse. Best of references. Address 458, care of this office.

Substitute Work or Location Wanted

An experienced physician is available at once to do substitute work. Address 456, care of this office.

High-Grade Stenographer Wants Work

A high-grade stenographer with four years experience in medical work desires a position. Can give best of references. Address 457 care of this office.

Apparatus for Sale

One Wappler *X*-ray Stand, and one Potter-Bucky Diaphragm (Engeln made). Both in good condition and reasonable in price. Address 454, care of this office.

Practice for Sale

In East Central South Dakota. Territory is 18 by 30 miles in extent. Five other towns without doctor in this territory. Practice runs from seven to ten thousand dollars yearly. Address 459, care of this office.

Physician Wanted

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OCULAR CONDITIONS ASSOCIATED WITH DIABETES*

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The ophthalmologist of to-day is no longer a special technician. He must and does contribute much as a diagnostician working in a special field. Diabetes is one of the common general diseases in which interesting and important eye changes occur and knowledge of their relative frequency, their recognition, and prognostic significance is a distinct aid to the general diagnostician. At times these eye changes cause great deterioration of vision through a variety of different causes. Even without visual impairment they may be the means of making the first diagnosis, being more obvious to the ophthalmologist than to the general physician. Perhaps the most accurate recent figures, bearing upon the incidence of ocular complications of diabetes, are those of Anderson,[1] of Copenhagen, who studied 292 diabetics under full mydriasis.

INCIDENCE OF COMPLICATIONS

Total diabetics examined	292	
Eye complications (as follows)	82	28 %
42 Retinal complications		52.4%
13 Diabetic cataracts		16. %
12 Transitory refractive errors		14.6%
7 Vitreous opacities		8.5%
4 Retrobulbar neuritis		4.9%
1 Muscle paresis		1.2%
1 Iritis		1.2%
1 Atrophy of optic nerve		1.2%

Changes in refraction are common diabetic manifestations and follow a quite definite rule, sometimes with mathematical precision. According to Anderson[1] they occur in 14.6 per cent of diabetics. The tendency is toward myopia, with suddenly increased blood sugar, toward hypermetropia after a rapid decrease in blood sugar (especially after energetic treatment) with a return to the individual's normal refraction as carbohydrate metabolism becomes stabilized. These changes may be as great as seven or eight diopters and are probably due to osmotic processes involving the lens, caused by concentration of the blood and tissue fluid with sugar content. The refraction variation cannot be explained by changes in the refractive index of the ocular fluids because the percentage of sugar in the aqueous and vitreous could not possibly develop the concentration necessary to produce some of the extreme refractive changes found. The range of accommodation is generally found normal and is not a factor; in most patients refractive change occurs after accommodation has become fairly inactive. Accommodative paresis would not explain the myopia at all. Lenticular change seems a plausible explanation for these reasons: (1) because it most easily explains astigmatic changes which also occur; (2) the lens is known to be naturally unstable in diabetes as illustrated by the development of cataract; (3) Elsching[2] observed no refractive change in one eye when its lens had been removed for cataract whereas the other eye showed refractive changes when its lens still functioned. Duke-Elder[2] explains the lens change by osmotic physical laws; that is, when the sugar content of the fluid in which the lens is bathed reaches a high point, an actual increase in lens volume occurs thus producing myopia; when sugar excretion is at a maximum, the osmotic flow is from the lens to the intra-ocular fluids with resulting marked hypermetropia; as sugar metabolism stabilizes, lens volume becomes normal and its refraction reverts to the original normal.

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*Presented at the North Dakota State Medical Association, June 1, 1927, at Grand Forks, N. D.

The following case is illustrative of the refractive changes sometimes seen:

On February 27, 1924, the refraction of Mrs. J. W., aged 53, was as follows:

R +1,00S ⊏ +.50C x 120° = 20/20
L +1.25S ⊏ +.25C x 20° = 20/20—

and with plus 2.25S added gave Jaeger .37 right and left. On August 23, 1926, she complained of blurring of distant vision and inability to use her added near lenses at close range. Under homatropin her refraction was found to be:

R —.25S ⊏ —.50C x 30° = 20/20
L —.25S ⊏ —.50C x 120° = 20/20.

Thus the total mean change in refraction is equivalent to —1.75 D. Sph. The urinalysis showed sugar 3.25 per cent with blood sugar 288 mg. per 100 c.c. After treatment by Dr. Henry Ulrich, of Minneapolis, she returned seventeen days later complaining of inability to use the prescription with which she had seen perfectly two weeks previously and she required plus 2.25S added to read normal type, showing a reversion with a hypermetropia higher than originally. On October 14, 1926, she again returned entirely sugar free and accepted one-quarter diopter higher than her original 1924 prescription. On February 4, 1927, her metabolism had practically become stabilized, her blood sugar was 260 mg. per 100 c.c., but refraction and vision were practically the same as in 1924. There was no pathology in either eye upon ophthalmoscopic examination excepting evidences of arteriosclerosis. Duke-Elder[2] has published three carefully studied cases showing relation of refraction change to blood sugar chemistry and sugar excretion and has definitely shown that the hypermetropia following myopia occurs when sugar excretion is highest.

Retrobulbar neuritis in diabetics is fairly rare. It is absolutely identical clinically with the evidences found in nicotine and alcoholic amblyopia. Failure in vision is accompanied by a central scotoma for red and green or both and because of this it has been confused with the amblyopia from those causes. Foster Moore[3] reported six instances among 61 diabetics studied. There can be little doubt of its definite entity because of its occurrence in some cases where nicotine and alcohol may be ruled out especially in the cases occurring in women. Moreover there is rapid improvement upon the disappearance of acetone and oxybutyric acid from the urine. The exact toxic factor is unknown. Wagner[4] of the Mayo Clinic has not found that epileptic patients on high ketogenic diets ever develop visual impairment. Zentmeyer[5] believes arteriosclerosis, incident to diabetes, is the real cause. Ronne[6] studied two cases after necropsy, finding distinctive degenerative, but not inflammatory, changes in the tracts, differing from those found in other types of retrobulbar neuritis and occurring throughout the papillo-macular bundle from the ganglion cells around the macula to the primary optic centers.

There can be little doubt that *iritis* may be definitely caused by diabetes. It is usually bilateral, characterized by great swelling of the iris with gelatinous exudate and amenability to carbohydrate-free diet. It is fairly rare if one excludes cases among diabetics in which focal infections are present, for in every iritis one may rarely exclude this factor in etiology.

Mr. LeR. S. came to the hospital on June 2, 1922, complaining of pain and redness in the right eye. It was his first attack of iritis and was exceedingly severe. His history and a complete physical examination revealed nothing of importance and no evidence of focal infection. Blood chemistry showed sugar of 480 mg. per 100 c.c., urea nitrogen 16.7, creatin 1.10; urinalysis showed 3 per cent of sugar and a trace of albumin with marked acetone and diacetic acid. Blood count and hemoglobin were normal; Wassermann negative; blood pressure 145/90. On June 11th the left eye became involved similarly to the right eye. Under strictly limited carbohydrate diet, after a period of digestive rest and with local treatment, both eyes had entirely subsided by June 20th and there has been no recurrence to date. He had had no previous knowledge of his diabetes. I might add that I suspected diabetic iritis in this case during my first ophthalmoscopic examination because of a decided acetone breath!

Postoperative iritis, in which the traumatic factor also enters, is usually of a sluggish type, but it may be most disastrous in its effect on vision, destroying the effect of perfect operation.

Ocular palsies are fairly common in diabetics affecting mostly the extrinsic muscles of the eye. I have found among my records a number of cases of their occurrence in adults. All showed marked evidence of arteriosclerosis. One would need to exclude this factor but it is very certain that the incidence of ocular palsies among diabetics is relatively much higher than otherwise. Undoubtedly, it occurs as a peripheral neuritis in many instances; but it also at times is probably due to small hemorrhages, either centrally or peripherally. Diplopia is most frequently caused by involvement of the sixth nerve, or branches of the third, and in my experience when the latter is involved, vertical diplopia or unilateral ptosis is the commonest finding. One may not exclude vascular degeneration in etiology in extra-ocular palsies but their frequent transitory character and the involvement of branches of the third nerve more frequently than involvement of the whole nerve, and because they occur when blood chemistry shows high sugar concentration, leads one to infer that they may more frequently be due to peripheral neuritis. In my own experience the prognosis is relatively better than in non-diabetics, when extra-ocular paresis is directly attributable to hypertension and arteriosclerosis alone. In no case of diplopia in an adult should the blood chemistry be overlooked.

A rare but interesting condition found in diabetes is *lipemia retinalis*. Benedict and Wagner have reported an instance of this with leukemia, but practically all other cases in the literature have been associated with diabetes, in which the fat content of the blood has reached at least 4 per cent. The retinal vessels have a characteristic salmon or milky appearance, the arteries being almost indistinguishable from the veins. They seem to lose their cylindrical contour, have the appearance of being overfilled, becoming quite white toward the periphery. Lipemia retinalis was originally accepted as a terminal symptom of juvenile diabetes but several cases have cleared up entirely under treatmnt. The only case seen by me in twenty-five years was one which has elsewhere been reported by Muscat.[7] This case was seen through the courtesy of Dr. Geo. F. Suker at the Cook County Hospital. He was admitted on July 10, 1923, aged 33, a heavy drinker with blood sugar 250 mg. per 100 c.c. on his first admission. He was discharged, quite normal, on August 31. When re-admitted three weeks later, his blood sugar was only 169 mg. per 100 c.c. The lipemia was first noticed on October 24 and while he was under insulin treatment. I saw him when the picture was typical and vision was 20/20. In this case the ophthalmoscopic changes persisted three weeks, during which time the blood tests, carefully recorded, averaged 3200 mg. of fat content per 100 c.c. If looked for, undoubtedly lipemia would be found more frequently especially during diabetic coma. (Lantern slides shown)

The *retinitis* associated with diabetes occurs in about 10 per cent of hospital cases, but undoubtedly the incidence is much higher than this, occurring as it does in adults and not in younger patients of whom the percentage of hospital admissions is relatively higher. The question has been raised whether diabetic retinitis has any distinctive features. It oftentimes resembles the arteriosclerotic retinitis so well described by R. Foster Moore, and it is true that it occurs principally in patients who are subject to arteriosclerotic retinitis. From the latter it differs in the comparative absence of the stellate figures at the macula. One does not find so frequently the exudative "snowbank" patches seen in renal retinitis unless evidence of nitrogenous retention is also evident. The patches have rather sharp-cut edges with rather a solid, soapy or waxy appearance, according to Moore, and are unevenly distributed as an irregular ring wide of the macula. On the other hand, one cannot say that the retinitis is dependent on blood conditions, such as acidemia or hyperglycemia for this is frequently greatest in younger subjects, and in the young patients one does not see diabetic retinitis. The fact that it occurs in subjects who have cardiovascular disease speaks for the importance of angiosclerosis as an associated factor in etiology. Undoubtedly, age, tissue and vascular changes are more important factors than the blood chemical changes incident to diabetes itself, in which respect it differs from renal disease.

The most characteristic picture which I can describe is that which shows around the central region of the retina, small, bright, punctate spots in the vicinity of the main vessels on either side of the nerve but especially around the macular area. Abundant hemorrhages are comparatively rare and are usually petechial in character in the deeper layers of the retina. Friedenwald[8] has found central punctate retinitis twice as often in diabetics as in cases where diabetes was not discovered. De Schweinitz[9] suggested the label "retinal disease associated with diabetes" and would include under this heading not only the exudate type characterized by widespread areas of yellowish-white exudate, arranged in zone-like areas above and below the macula, but also cases with masses in the central retinal area. Moore found that it occurred in no patient under thirty-nine years of age. Wagner[10] found retinitis in 44 of 300 diabetics, but in 80 acute cases none showed retinal changes. Practically all of his patients with retinitis were of the mild type showing evidence of vascular disease. Of course we have arteriosclerotic and albuminuric retinitis occurring in diabetics.

The colored illustrations are fairly typical. (Plate I.) The retinitis was discovered following a cataract extraction in 1922 in the right eye, and in 1924 similarly in the left eye. In the left eye, (illustrated in Plate I,) vision was still normal on May 7, 1927, most of the original retinitic spots have been absorbed and some new ones formed. Treatment in this case has been purely dietetic. The prognosis for this type of retinitis is relatively much better than in the purely arteriosclerotic and albuminuric types so commonly seen, and under insulin therapy will undoubtedly become much better.

Plate II illustrates a quite different, but not unusual, type of diabetic retinitis. The patient, aged 47, was under the observation of Dr. Hendrie W. Grant for many years, who kindly permitted me to record the fundus picture. When first seen by him there were numerous fine macular hemorrhages. The blood pressure was 205/90, the blood sugar .225. There were never any retinal signs of hypertension. The patient had been faithfully treated for eight years for her diabetes. This type of retinitis is perhaps more frequently seen in the younger adult patients.

The best understood of all the ocular complications of diabetes is *cataract*. Clegg[11] found 87 of 1660 cataract patients had glycosuria. In a series of 514 cataracts operated on by myself or my assistants, glycosuria has been present 24 times, or about 4 per cent of all cases, that is, all cases coming to operation. Many other cases seen have been refused operation because it has involved too great hazard. True diabetic cataract is probably typically seen in young subjects, always bilateral, starting in the posterior layers of the lens. The juvenile type is characterized by great rapidity of development,—often a few weeks. The cataract appears blue-white, milky, and homogeneous. Even by early study with the slit-lamp it is not possible to differentiate diabetic lens opacity from other types occurring in senile subjects. The characteristic appearance in an adult during the early stages is the diffusion of the opacities between the posterior primary embryonic nucleus and the cortical demarcations instead of the usual senile spike-like and cleavage lines. Langton[12] believed cataract in other than frank diabetic patients may be due to defect in ability to assimilate carbohydrates. He studied a series of cases which suggested that at least in atypical lens opacities this may be true. The exact cause of cataract in diabetics is subject to controversy. It is probably not due to dehydration of the lens. Burden-Cooper[13] believed there was a, definite hydrolytic factor. Undoubtedly, the total incidence of cataracts is much higher than is indicated from statistics taken before blood sugar estimations were routinely made. In the matter of limiting operative hazard, Garrod[14] believes it is of greatest importance to properly prepare diabetic patients before operation by intervals of fasting and alimentary rest with regulation of the patient's carbohydrate tolerance, and elimination of hyperglycemia and acetonemia. Benedict[15] has noted the untoward effect of insulin in the production of hemorrhages after operation and he advises that insulin be withheld after operation for at least four weeks, depending upon the proper dietetic management entirely. In my own experience, postoperative hemorrhage into the anterior chamber, in diabetics after an iridectomy has been done, is relatively much more common than in the ordinary run of cases. Among 24 operated cases (in practically all of whom blood sugar was previously reduced to a near normal) useful vision was obtained in 21. With one of the failures, insulin had been used over a period of two years, and throughout her operative convalescence. She obtained useful vision immediately but a disastrous hemorrhage occurred six weeks after a supposedly safe convalescence. In a second case, aged 85, hemorrhage occurred on the fourth day, but some useful vision was preserved. The third case developed hemorrhage and iritis with secondary glaucoma after three months. Thus the results, as regards this small series, were successful in about 85 per cent, considerably less satisfactory than the average for cases of all types. In general, it may be stated that since we are now able to stabilize metabolism, the outlook for cataract extraction in diabetics is increasingly good, almost as good as in the non-diabetic cataract.

All diabetic ocular complications of themselves constitute an open chapter as regards prognosis under modern therapy, for the prognosis of underlying causes has undergone, and is undergoing, complete revision since Banting's discovery. The treatment of ocular complications of diabetes is essentially the treatment of the underlying faulty metabolism. It should not be undertaken by the ophthalmologist but is distinctly a problem for the internist.

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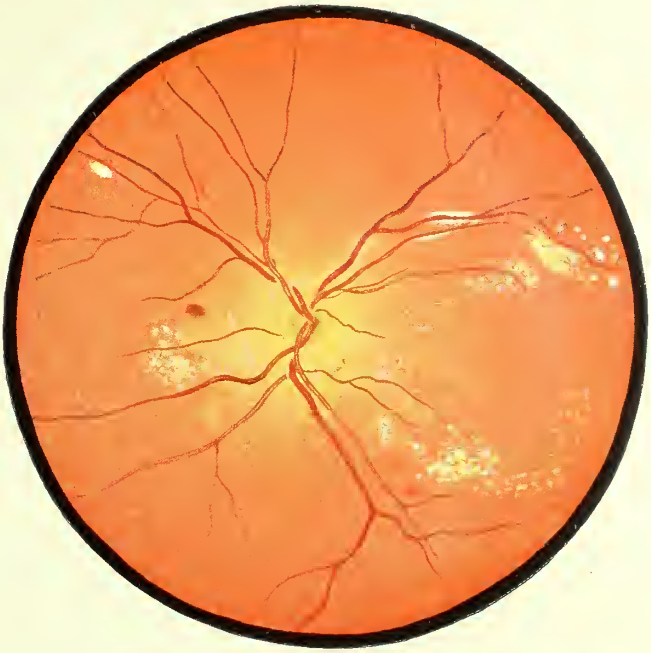
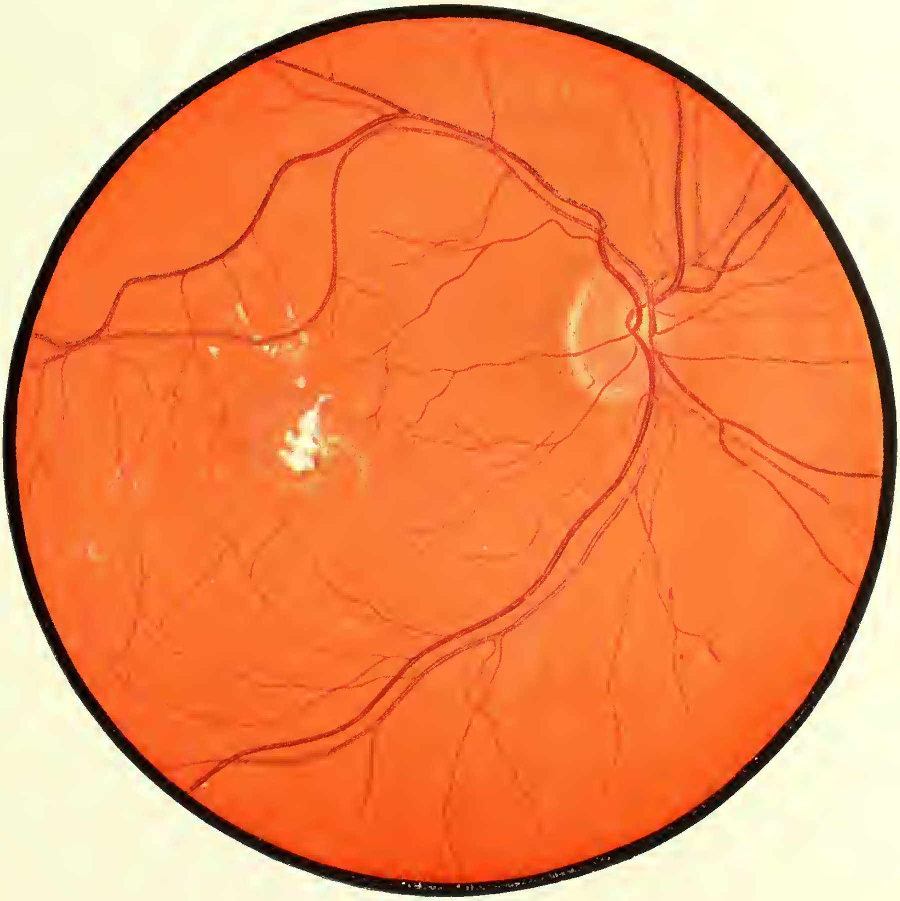


Plate I



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DISCUSSION

Dr. Ralph Taintor (Fargo, N. D.): I heartily endorse Dr. Burch's statement that careful examination of the eyes should be a part of every medical examination. It is surprising how much information can be gained, particularly in diabetes and arteriosclerosis, in this way. I find a great deal of pleasure in making a fundus examination of every routine eye case. I find many cases in which there is a suspicion of increased blood pressure, and for my own satisfaction I take the blood pressure in all these cases. Frequently I pick up a high blood pressure and refer the patient to a general man for a thorough examination. In one instance the patient never had any idea that she had a high pressure, but the retina showed the typical sclerotic vessels, and the blood pressure was 220 systolic. I referred her to a general practitioner, and about a week later she had a stroke. This is an example of what the ophthalmologist may do in helping out the general practitioner.

Dr. G. M. Constans (Bismarck, N. D.): I was interested in the retinal changes that were present in the case mentioned by Dr. Burch. I agree with him that these patients are usually over thirty, and also that a patient with mild diabetes under thirty rarely, if ever, develops retinitis. If so it usually does not amount to much. It is the patient past thirty who develops the acute retinitis.

Dr. Burch also mentioned the fact that in the diabetic patients the retinitis usually develops along the veins. Small hemorrhages will frequently be found along the veins, and even where there is an arterial sclerotic retinitis this will often show a difference and differentiate between them.

Regarding the toxic amblyopias: No one can say whether they are due to tobacco, alcoholism, or foci of infection, or whether they are due to diabetes, and I do not think that Francis' test is a satisfactory one. However, no one has ruled out the question of foci of infection, particularly in the prostate or cervix, which is not often investigated. Wagner believes that it is the toxic factor plus the diabetes which throws them over the borderline.

I was glad to hear Dr. Burch speak of the question of cataract operation in these diabetic patients. I believe that the use of insulin often throws them into hemorrhage following operation. I think the pre-operative use of insnlin and then discontinuing it, holding the patient with dietary measures, is the best plan.

Dr. John H. Rindlaub (Fargo, N. D.): Dr. Burch emphasized at the meeting of the North Dakota Academy what he spoke of here to-day; that is, the advisability of frequent conferences between the ophthalmologist and the internist. We know that many times patients are referred to us from nonmedical individuals. Within the last two months we have had patients sent to us by optometrists, and a correct diagnosis of retinitis had been made by them. Many of these patients go to internists, and the trouble can be diagnosed by them and the patients be referred to the ophthalmologist, or vice versa. We know that in many instances there is pathology in the periphery, and it requires very careful examination or it will be missed.

Another point Dr. Burch did not bring out is that we often have an albuminuric retinitis combined with a diabetic retinitis. In the latter we have the soft-edged cotton-wool white spots around the macula, and in the albuminuric retinitis there is the zone portion with the star-like appearance which is always indicative of albuminuric retinitis and uncommon in diabetic retinitis. Some one has said, I think it was Garrod, that in 10 per cent of the cases of diabetic retinitis, nephritis is present as well, and albumin will be found in the urine, so we must keep the two diseases ever in mind.

I was much interested in the remarks on cataract. We have had a patient, aged twenty, referred to us with opacities in both lenses. The patient was placed on insulin and apparently has made a splendid general recovery, but this has produced no change whatever in the opacities. I have always wondered why if the insulin produces so much general benefit we do not get some improvement in the changes that are produced in the lenses.

I think Dr. Burch should be congratulated on his election as Professor of Ophthalmology in the University of Minnesota. I know of no better man for the position.

Dr. Burch (closing): I am very grateful for the discussion and the kind remarks.

The whole subject of insulin, so far as it relates to eyes or ocular complications in diabetes, is very interesting. Aside from the fact that we have proved that the danger of hemorrhage following any operation is greater after insulin therapy than without it. I think little definitely is known. We do not know that it has any effect on the prevention of ocular complications.

I am grateful for the discussion and the kind remarks. The whole subject of insulin so far as it relates to ocular complications in diabetes is very interesting. Excepting the fact we have proved that the danger of hemorrhage following any operation to be greater after insulin therapy than without it, not much is definitely known. We do not know that it has any effect on the prevention of ocular complications.

Regarding the fundus examinations which Dr. Tainter discussed: I cannot believe unless accurately interpreted they have much practical value for men in general practice. Interpretation of fundas findings requires a great deal of study and experience. In diabetes associated with renal conditions, arteriosclerosis or hypertension, one is often put to it to know just what interpretation to place upon the findings. I do feel, however, that ophthalmologists are learning to appreciate the value of clinical interpretations in connection with their own findings. The ophthalmologist who is practicing in isolation without the aid and advice of the internists and who fails to collaborate with them, is certainly not practicing medicine.

THE DOCTOR, THE LAWYER, AND THE WORKMEN'S COMPENSATION LAW*

By Leavitt R. Barker
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A few evenings after your President asked me to speak to you informally at one of your luncheon meetings upon the Workmen's Compensation Act, I happened to pick up at home and read an old favorite of mine, Sir Walter Scott's Ivanhoe.

Perhaps because my business is the trial of causes, and perhaps because of a subconsciousness that I was soon to address you with regard to the trial of a very special class of causes, I was particularly struck by Sir Walter's description of Rebecca's trial by combat on the charge of witchcraft. You will recall the weird picture he paints—the fanatically stern and earnest soldier-priest presiding, the proud but cowed Knights Templars standing by, the awed and silent multitude, the gay flags and pennants, the fanfare of trumpets, the field of combat, the pale and beautiful Rebecca, and behind her the four black slaves, the faggots awaiting fire, and the stake. You will recall the haughty Brian de Bois-Gilbert, the champion for the prosecution of the maid he had loved and wronged too much, full panoplied and waiting with nerves distraught, the tense waiting for the arrival of Rebecca's unknown champion, Ivanhoe's dramatic appearance at the last moment, the charge of iron clad horse against iron clad horse, the splinting of lances, the toppling of both champions to the dust, the judgment of God in the form of a ruptured blood vessel in the heart or brain of the Templar.

A strange picture and dramatic, yet not so foreign after all to those of you who appear in our courts even to-day. Do we not still have our trials by combat? We have still our tradition-steeped presiding Templar Abbots in the guise of judges; for knights champion we substitute lawyers armed with the subtleties of their trades; and for the judgment of God we substitute the sanctified guess of honest but too often bewildered jurors.

For many years this was particularly true in causes between master and servant. A workman broke his back in a fall from a building scaffold and was left a helpless invalid for the rest of his life. Unless his employer were *proved* to be careless, that is, negligent, he could recover nothing. Liability was predicated upon fault. But even if he proved fault, he had other hurdles to leap—this man with a broken back. If he had been pushed off the scaffold by a fellow-workman carelessly backing into him, he could not recover. He was barred by the "fellow-servant rule." If he had merely grown dizzy and fallen from an unaccustomed height, he could not recover. He had "assumed the risk" of his employment. If he had himself chosen an obviously defective plank which broke under his weight, he was barred from recovery by "contributory negligence."

But if he *could* leap these hurdles, often after several years' litigation he would be awarded thirty, forty, fifty thousand dollars, or more. This his employer had to pay, plus his own attorneys' fees—if he had it. But the employe's attorney usually took half of it; then he deducted costs and expenses, plus advances made to his client including medical and living expenses during the period of the litigation. Pay day for the lawyer, but our poor friend with the broken back was in luck if one-fourth of the recovery remained to put in the bank to keep him and his for the rest of his life. Costly, troublesome, archaic, unsatisfactory business; yet up until 1913, in Minnesota, and about that time in most states, it occupied from two-thirds to three-fourths of the total business of our courts.

Needless to say, there was dissatisfaction. Labor, capital, and even the lawyer, who often advanced substantial sums in a losing case—everybody concerned murmured. Murmurs grew to a roar, and roars to legislative resolution. Humanitarians, sociologists, economists united. The lawyers, they said, have failed, betrayed us. (A lawyer is a man people pay to get them out of trouble, and then revile, whether he does or doesn't). The lawyers, they said, take our money to prate about negligence, contributory negligence, assumption of risk, fellow-servant rules, and leave our wounded unrecompensed, a burden on society. (They forgot perhaps that such rules were good rules when society was simple, industry in the hands of individuals, and servants skilled craftsmen.) Blood is the price of industrial as well as political progress. Industry should pay, not the crippled workmen. Let us be done with clap-trap lawyers and their clap-trap quibbling. When a workman is hurt, the only question should be, How badly is he hurt?—a question not for lawyers to answer, but for doctors. Like the darky woman, hurt in an automobile accident, who said "I don't want *damages;* I craves repairs."

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*Presented before the Hennepin County Medical Society, April 6, 1927.

So to the doctors they turned for the solution of their problem, as suffering humanity has always turned to the doctors since the days of Hippocrates. And the result was the Workmen's Compensation Act. The problems of the Workmen's Compensation Act, gentlemen, are essentially medical problems not legal.

The first Act was passed in Germany in 1884. By 1900 twenty-five countries in Europe had such acts. England lagged, and, although she had a partial act in 1897, not until 1908 did she have an act of general application. The German act was a sort of workman's insurance. The English act imposed liability without fault, but without the insurance features. The Minnesota act is modeled on the English act and was passed in 1913. At first, jurisdiction was given to the Court, that is, a judge to administer without a jury. In 1921 the Industrial Commission was created and the German idea incorporated to the extent of making employe's insurance compulsory. Nearly every state in the Union now has the act in varied forms, the last being Missouri, which enacted the law last year. A St. Louis attorney told me a few days ago that the act had reduced the business of certain St. Louis attorneys at least 65 per cent.

The Minnesota act applies to all employments, except farm labor, domestic servants, casuals, and employes of steam common carriers, and except those who have elected not to come under the act.

The problems under the act I repeat are essential medical ones, even the problems of where is the money coming from to pay the doctors. The State, you see, furnishes an attorney to the employe for the asking.

My limited time will permit me to sketch in a most general way the nature of these problems. I understand you expect to discuss some of this in detail at later meetings.

Let me make clear at the outset, the act is not health insurance and is not even accident insurance. It simply purports to recompense employes regardless of fault according to a definite schedule (which has been repeatedly increased in amount from time to time since 1913) for accidents arising out of and in the course of the injured man's employment, and for certain named occupational diseases. This accords with the philosophy behind the act which is to make the industry bear its loss and, of course, pass it on to the long-suffering but after all ultimately responsible "ultimate consumer," to wit, to you and me.

Usually, therefore, a doctor has to determine, first of all, Is a disability the result of accident? If so, assuming a given history of accident to be true, is it the result of that particular accident alleged to have arisen in the course of and out of his employment? If not the result of accident, then is it one of the twenty-three occupational diseases listed in the Minnesota Act? If either the result of accident or of a listed occupational disease, then arises the primary question of the extent and duration of disability, a subject upon which I believe one of your number is to devote a paper in the near future. If a disability is the result of a disease not listed, or even has gradually developed out of the work by repeated minor insults, such as the constant shock of a pneumatic hammer, the disability is not compensable.

Perhaps the most difficult problem of all arising under the act is that of aggravation of pre-existing disease by accident.

From the outset the courts have liberally construed the act to favor the workman and should.

Thus, a man with a well-devoloped aneurism sustains an accident, the final result of which ruptures the aorta, and he dies. The death is compensable, even although the accident would not have harmed a normal man. This is an aggravation of a pre-existing condition.

Or take the converse: A man has a slight cut, not sufficient in itself to disable him or anyone else. Infection sets in, and he loses his arm or his life. The loss is compensable.

Traumatic hernia is another example of the same principle. It is now well settled that when a pre-existing hernia, or tendency to hernia, is aggravated by accident, the hernia is compensable. If it can be shown to have gradually developed without an accident, or if accident can be ruled out, it is not compensable.

Chronic arthritis is another troublesome field. A man about at the end of industrial usefulness, with a back-bone stiff with arthritic deposits, suddenly lifts something and feels a twinge of pain. He reports an accident and is put to bed. He never gets up. Is it compensable?

Only the doctors can tell us. Was the insult severe enough to aggravate the condition at all? If it was, the accident is compensable. Then arises the question, Is it a temporary or a permanent aggravation? If only temporary, the doctors have to tell us how long the accident disabled him, when the effects of the accident have ceased, and when the disablement can be said to be the result solely of disease—not always an easy matter.

In this field of aggravation particularly there is great opportunity for fraud, so much so that even the Industrial Commission scrutinizes closely such claims. The malingerer is always with us, and here it is the doctor that is the sole safeguard of justice, on the one hand zealous to see that the meritorious claimant attains his due, on the other quick to detect and expose the fakir.

I think I have said enough to indicate that the doctor plays a stellar rôle in the administration of the Workmen's Compensation Act and that the lawyer has been relegated to the background.

Just a word in closing regarding a few practical details regarding the doctor's contact with the act.

He may be called upon to treat an employe; he may be called upon to examine an employe; he may be called upon to testify before a referee.

With regard to treatment: The employer is required to furnish medical attention for ninety days.

The employer is not liable for treatment ordered by employe unless the employer has refused to furnish proper medical care. The employer is not liable after ninety days unless on order of the Commission to continue necessary treatment. The employer is not liable if employe changes physicians, except on order of the Commission.

The Commission passes on reasonableness of charges.

A doctor for his own protection should communicate with the employer or insurer if he expects to hold the employer responsible for his services.

With regard to examination: This may be for one of the parties or as neutral physicians appointed by the Commission.

The employe is required to submit to examination. He may have his own physician present, but each party bears his own expense.

A neutral physician may be appointed by the Commission. A copy of his report must be mailed to the parties. Either party may have the privilege of calling a neutral physician for cross-examination. The expense is met as directed by the Commission either by the State or by one of the parties.

An autopsy may be required by the Commission in death cases.

With regard to testimony: Any physician whose services are paid by the employer or who is appointed by the Industrial Commission may be required to testify. In such cases his testimony is not privileged.

The referees, before whom the Workmen's Compensation cases are tried, are skilled men and know their business. They know as much, for example, about anatomy as the average doctor, and they are honest. It is the duty of doctors and lawyers alike to help them all we can. After all, we are all servants of Truth—let us never forget it. Given the Truth, Justice, blind though she be, will not lag far behind.

THE PREVENTION AND TREATMENT OF SPEECH DEFECTS*

By Mr. G. K. Young

Demonstrations with Pupils by

Mrs. Edna Hill Young

MINNEAPOLIS, MINNESOTA

The Hill-Young School of Speech was organized five years ago, in Minneapolis, for the purpose of bringing more help to the child handicapped by a speech difficulty. One of its vital aims also is to help bring about the prevention of defective speech, by correct early training.

There is a very simple, definite way by which the muscles controlling the speech mechanism may be trained so as to produce perfect speech by two and a half or three years of age. Every child should have the benefit of the kind of training of which we speak. The average child uses "baby-talk" for a period lasting from six months to several years. We are not objecting to the sound of it. The vital thing is, that the muscles learn to move one way in "baby-talk" and then after a period of time are required to move another way for correct speech. This produces a tendency in the mouth or breathing muscles to do two distinct things, instead of developing one strong habit of doing the correct thing at a given time. We believe that these "double tendencies" to move, woven into the speech muscles by the early acquiring process, form one basic cause of stuttering. Fortunately the corrected movements, usually gained from three to six years of age, do ordinarly go through the necessary repetition process, conflicting more or less with the first movements, but finally gaining the ascendency, and so the average person acquires speech which is not defective. But a fright, the wrong environment, or an upset emotional condition may cause a continued conflict between the movements which produce "baby-talk," and those of normal speech, or may cause, years later, the re-appearance of first movements, to conflict with the later acquirements of perfect speech. In either case stuttering may develop, built upon these unnecessary basic conflicts of muscles, which can be prevented by a little help at the time of acquiring first speech.

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*Presented before the Hennepin County Medical Society, Minneapolis, February 6, 1928.

An unstable condition for the future is made wherever muscles are permitted to move in one way for a given stimulus, and then are required to move another way later for the same stimulus. And yet this is the usual basic condition of all children. Is it any wonder that we have a million stutterers in our country?

This earliest training makes use of nature's best time for acquiring new muscular movements and positions. The muscles become more or less "set," even by five years of age, as compared to two or three years of age. If the thought and need of this early muscular training could be better understood, another very grave problem could be averted,—that of the child speechless at six or seven, which usually means the loss of the individual to self, family, and society, as the years go by. Mentality has not the tools for development without words. Early speech training of the kind of which we speak could save many children, born normal, whose speech is stopped at the usual time of speech development by illness, isolation, or an upset emotional condition. We are not referring to the speechless, feeble-minded child.

By the present methods the average normal child spends a year or two at least in the correction of "baby-talk." With speech movements perfected by three, this time could be used to much better advantage in gaining a larger vocabulary, in repeating correct movements through correct daily speech, thus strengthening correct muscular coördinations already begun, instead of laying a foundation which makes for hesitancy, lack of coördination between thought and speech, and, lastly, stuttering. This growth and development of a child from three to five is marked, if speech movements are permanent at three years of age.

We urge all interested in this step toward better, early development of the child to visit our school and permit us to demonstrate how this gain may be brought about.

Often in a few conferences a parent may learn how to continue training at home, which can result invaluably for the child's future. We give private lessons if desired to those wishing help for their normal child, in the way suggested. We are prepared to work with children from one year of age to eight or ten years. We have a kindergarten for training little ones where that plan seems desirable.

Some children live with us as a family group. Our school has been planned so as to hasten speech correction and also at the same time to help the child to keep up his regular grade work. For which purpose we employ one fully qualified teacher to each group of six children, thus insuring practically individual attention. As we have watched the child with defective speech we have felt that he needs to spend more time getting his speech correct than is generally given. Defective speech may drag on through the years if not corrected by constant daily practice of correct forms. That is why we have planned to have children live with us, eat with us, and so make the time count for quickest, possible correction. Many children make better progress also when removed from the old environment in which they have talked incorrectly.

The child with the cleft palate should be helped toward better speech as soon as the operation to close the palate is successfully completed. Some muscular training may be given earlier, in certain cases.

There can be untold gain to the race generally, and especially to many of its individuals through the prevention of speech difficulty, by the best possible early help in acquiring the correct coördinations for speech. But the idea of this very early training is new to the most of people. The public must be educated to understand the meaning of the benefits resulting therefrom. In this day of tests, and definite standards for each year of age, the superior child wins out. The poorly equipped

child stands little show in the battle with strong. If parents want superior children at eight, ten, and from then on, they can do nothing which will result more efficaciously than to have all the many complicated movements of speech begun correctly, as desired permanently, with no need of further change. If this is accomplished by three, the basic conditions are best for fullest development. This condition makes for a flow of speech later on, is the best basic condition for coördination between the nerves and muscles of the speech mechanism, and makes for freedom from self-consciousness during speech, since all memory of the acquiring process is forgotten at this early age.

The children whom we have known to acquire perfect speech thus early have developed in a superior way. This thought at least should find its way into the general understanding—that the child's speech which is not developing normally should be attended to when the fact is first recognized. A little help at the right time can mean the saving of many a child to normal living, which is not possible if silence or incorrect speech gains too strong a hold in muscular habits. A beautiful child of six years, with no speech, such as often comes to us, is one of the real tragedies of life, to the family who have kept hoping that speech would "come."

There are many childhood problems in which speech bears an important relationship. The elimination and prevention of much difficulty, inefficiency, loss, personal grief, and discomfort can become the result of a new way of thinking and of organization of forces in which a child's early speech may be guarded as is his general health. We urge the coöperation of all forces interested, to hasten the day when this greater gain may be brought about.

FIBROMYOMA OF THE JEJUNUM*

By Joseph Sorkness, M.D.
JAMESTOWN, NORTH DAKOTA

Fibromyomata of the jejunum are of sufficient rarity to merit report. This is particularly true of those cases in which a history, physical findings, and operative findings are available.

King[1], in a résumé of the literature, was able to collect 119 cases of benign tumor of the intestine of which only 8 were located in the jejunum. The histological structure of these eight cases was as follows:

Fibroma	1
Myofibroma	1
Lipoma	1
Neurofibroma (multiple)	1
Fibromyoma	4

In contrast to this number, 23 were found in the ileum, 22 in the colon, and 36 in the rectum.

Saint[2], in an excellent article on polypi of the intestine, collected 44 cases from the Mayo Clinic, of which 13 were in the small intestine and only 2 in the jejunum. Of these 1 was a hemangioma and the other a case of glandular hyperplasia. In his series he found multiple polypi to be of much more frequent occurrence than single polypi.

The symptoms of intestinal tumors, as given by King from Heurtaux, are classified into three groups:

1. Small tumors—no symptoms.
2. Large tumors, growing toward serosa—no symptoms except palpable mass.
3. Tumors causing intestinal disturbances which may be
    a. irritative.
    b. due to partial or complete obstruction.

In discussing the latter group he states that those causing grave intestinal disturbances are rarely palpated.

The following case is of interest because of the opportunity to follow it through to recovery:

J. R., male, age 34, was first seen on April 27, 1927, complaining of pain in the upper abdomen (almost constant) and swelling in the left lower abdomen, which was not constant. He dates his symptoms from the evening of March 14, when he drank two bottles of beer. Shortly after this he had a cramp in the upper abdomen. Since that time he has had almost constant cramp-like pain in the upper abdomen and states that his lower abdomen "swells up" at times—most marked in the left lower quadrant. He did not vomit until the date on which he was first seen; on that morning he had vomited a large amount of greenish material. He had been unable to eat much for three to four days on account of distress. Thought he had lost about fifteen pounds since the onset. His bowels were regular until day before admission, when he was constipated—took two Hinkle's pills, which increased his distress. His past history was essentially negative as was his family history.

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*From the Surgical Department of the Stutsman County Clinic of Jamestown, North Dakota.

On physical examination the only findings of interest were those in the abdomen. There was tenderness on palpation in the left lower and upper quadrants extending to the epigastrium. A definite mass was palpable to the left and a little below the umbilicus, firm, movable, and dull to percussion. On rectal examination this mass could be felt high up, was firm to the touch, and freely movable.

His Wassermann was negative, urine negative, hgbn. 80 per cent, red cells 4,900,000, w.b.c. 12,600, with 74 per cent polys. His temperature was normal.

The patient was referred to Dr. H. M. Berg for barium study, who reported as follows:

> Gastro-intestinal study: Large amount of fluid remaining in the stomach, which is located in left lower quadrant in erect position, and lies over the mass which was palpable previous to examination. Stomach and cap appear to be normal. Meal passes through the duodenum, then around back of the stomach to a point six or eight inches below the stomach in the left lower quadrant, where it suddenly stops. The last eight inches of the jejunum proximal to this point are dilated to about three inches in diameter with obstruction clearly shown. On palpation the meal will pass this point in a very narrow tortuous stream. The mass lies right below the dilated portion of the jejunum. Two hours after giving the meal the jejunum is still dilated and a small amount of the meal has passed through the point of obstruction. At five hours the head of the meal is in the descending colon, with small amount scattered throughout the colon; small amount remaining in the stomach. At seven hours most of the meal has passed through the point of obstruction. Entire colon is well filled and is apparently not connected in any way with the dilated portion of the jejunum. At twenty-four hours colon well filled. No abnormality found. Appendix filled, fairly movable.
>
> Diagnosis: Almost complete obstruction of the jejunum fifteen to eighteen inches distal to the duodenum with considerable dilatation of eight to ten inches of the jejunum proximal to the point of obstruction.

Operation (Drs. Sorkness and Johnson) was performed on May 2, 1927. A left rectus incision was made, and the jejunum delivered. About ten inches from the duodenojejunal juncture a mass about two inches in diameter was found in the lumen of the bowel attached to the bowel wall, and on moving the mass dimpling of a small area in the jejunal wall was seen. The jejunum both proximal and distal to the mass was dilated to about twice its normal size and the walls thickened. We were unable to explain the dilatation and thickening of the distal portion. About three inches of the jejunum enclosing the tumor was resected and an end-to-end anastomosis performed. The abdomen was closed without drainage.

Post-operative convalescence was uneventful. The patient was immediately relieved of his cramps and left the hospital on the fourteenth day post-operative. Thirty days after operation he had gained seventeen pounds and felt well, and has continued well up to the present time.

Pathological examination of the tumor was made by Dr. W. A. O'Brien, of Minneapolis, who reported that the tumor was composed of smooth muscle and connective tissue and was benign.

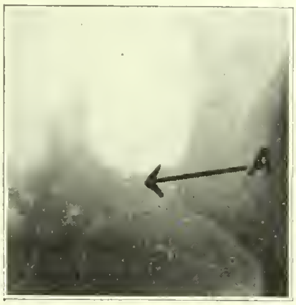

Fig. 1

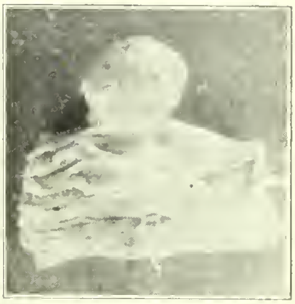

Fig. 2

Fig. 1.—Gastro-intestinal film taken two hours after a barium meal. "A" shows point of obstruction in the jejunum.

Fig. 2.—Tumor with portion of jejunum resected.

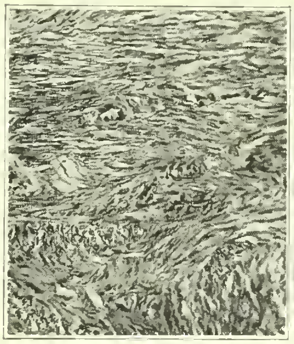

Fig. 3

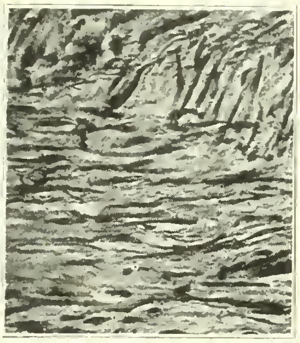

Fig. 4

Fig. 3.—Microphotograph (low power) of section of tumor.

Fig. 4.—Microphotograph (high power) of section of tumor.

Microphotographs were made of the section.

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ANNULAR SHADOWS*

By Arnold S. Anderson, M.D.
WABASHA, MINNESOTA

Due to the lack of sufficient comparative physical, *x*-ray, and autopsy evidence the question of annular shadows as seen in the *x*-ray film is still a debatable one. A follow-up of these cases by serial roentgenograms as done by Amberson and others is surely of decided value in forming a workable hypothesis, yet inasmuch as so many of the annular shadow cases make a complete recovery with a disappearance of the markings we are lacking, by necessity, in just that many autopsy confirmations; hence, lack of complete evidence. Splendid work has been done by a number of interested investigators in an attempt to clarify the situation, but the best of them are still at variance as to the exact underlying pathological disturbance. It would seem from a review of the literature that the most apt causes of these shadows are intrapulmonary cavitation and simple chronic or subacute localized pleurisy.

A brief review of some of the literature on this subject follows, together with a case report:

R. S. E. Murray states that in a study of annular shadows three observations are to be made:

(1). Actual detail of its contour. Small channels which connect it with central hilum shadow. All annular shadows, due to cavitation, show these drainage channels; annular shadows due to small localized areas of pleural separation, constituting pneumothoraces, do not have drainage channels.

(2). Relation of shadow to other structures in proximity. A deeply seated annular shadow at or about the center of the lobe of a lung cannot be due to pneumothorax. On the other hand, should such a shadow lie out in the periphery of the lung and show the drainage channel the interpretation is cavity.

(3). The detail of the shadow itself. Those presenting annular shadows—cavities—are more liable to repeated hemorrhage. Forty-seven per cent of all our cases that have been definitely active for a year or more have shown annular shadows. Eighty per cent of these were due to cavitation.

Sampson, Heise, Brown wrote as follows:

(1). Cavitation. The absence or marked diminution of lung markings inside an area or areas of rarefaction is the most dependable sign, and if the size and position of such an area or areas are taken into account a diagnosis of cavity can be made with much assurance.

(2). The profusion of lung markings, the greater or equal absorption of ray through these annular shadows, and also the fact that certain of them change their shape and size rapidly (3-6 months) make one very skeptical as to their being cavities.

Their conclusions were that in a study of 50 cases, they[1] were led to conclude that annular shadows surrounding areas of increased or equal absorption of the ray occur in patients more likely to be suffering from pulmonary softening and indicate rupture of the lung. Owing to the presence of adhesions only partial pneumothorax, with or without fluid, results. The usual occurrence is in the upper part of the greater oblique fissure and in the horizontal fissure on the right. Later they stated that some of these shadows may be due to simple pleurisies.

J. Burns Amberson, in a study of 50 shadows, gave out the following:

(1). 70 per cent are located above the 3d rib, usually in one of the interlobar fissures.

(2). In no case was annular shadow rarefied as compared with other lung markings.

(3). In no case was the outer border better defined than the inner.

(4). All shadows appeared in active disease. They disappeared with clinical improvement.

(5). He rejects theory of Brown, Sampson, and Heise on the grounds that:

> (a) The rate of incidence of lung rupture is not so high as pleural annular shadow.
>
> (b) Serial roentgenograms showed appearance of annular shadows high in active disease.
>
> (c) In pneumothoraces there is absence of linear tracings; usually located at the base; outline of lung and visceral pleura show and they are never rounded or circular.
>
> (d) The decrease and increase of size of the shadows cannot be satisfactorily explained by the pneumothoraces hypothesis.
>
> (e) No effusions occur with these annular shadows.

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*Presented before the staff of the Glen Lake Sanatorium, at Oak Terrace, Minn., September 21, 1927.

(6). The simple pleurisy hypothesis seems more tenable because:

(a) Most shadows are above 7th and 8th vertebral bodies between posterior parietal and visceral pleura or in upper part of one of interlobar fissures. Here lung rupture is uncommon. Here pleurisy is most common.

(b) Usually no characteristic symptoms with these annular shadows.

Dunham and Norton believe that most annular shadows are due to cavity. They proved their contention by pneumothorax on 55 cases and autopsy on 11 cases.

P. K. Brown stated that all annular shadows should be considered as cavities until diligent investigation proves that they are better to be interpreted some other way. Pneumothorax and pleuritic phenomenon theory has no autopsy evidence.

Ramos—Casellas—March, 1924, holds that autopsy evidence leads to the support of Amberson's hypothesis "that in a large majority of instances so-called roentgenographic pleural annular shadows accompanying pulmonary tuberculosis do not represent localized pneumothoraces secondary to lung rupture, but indicate rather the presence of simple chronic or subacute localized pleurisy with or without localized retraction and separation of the pleural layers.

CASE REPORT

This patient, a woman, 29 years of age, mother of two children, entered the Sanatorium October 22, 1925, with a diagnosis of far-adanced tuberculosis. Her family history is negative. Her past history shows chicken-pox, smallpox, influenza and pleurisy, and two operations (appendectomy and tonsillectomy). Otherwise negative. She dates her illness back to 7 years ago after birth of first child when she lost fourteen pounds weight in a few months period and never regained her former strength. She developed a cough in June, 1925, followed by general malaise and early fatigue. Diagnosis was first made of pulmonary tuberculosis at the Mayo Clinic on October 21, 1925.

At the time of admission she complained of loss of strength, moderate cough and about one-half ounce expectoration a day. Temperature varied from 98.6° to 99.9.° Pulse, around 100. Physical examination showed slight impairment and mucous râles over both upper lobes. No other signs. At no time during her stay here did the physical signs change except for a decrease of râles. No signs of cavitation were noted. Sputum remained positive from October, 1925, until September, 1926, then it remained negative until June, 1927. She gained 16 lbs. in weight.

X-rays were taken at the Mayo Clinic on October 15, 1925. These showed extensive tuberculosis of both lungs with a large cavity at the right apex. Three months later, on January 18, 1926, an *x*-ray at the Sanatorium showed tuberculous infiltration to the 3d rib right and 5th rib left. No evidence of cavitation. Three months later, on April 20, 1926, an *x*-ray at Mayo Clinic showed tuberculosis infiltration in right upper lobe with cavity under 1st rib. On the left there was mottling in 2nd and 3d interspace. Four months later, on August 6, 1926, *x*-ray at the Sanatorium showed an area of rarefaction in 1st interspace with some mottling on both right and left sides. Eight months later, on April 11, 1927, *x*-ray at the Sanatorium showed an absence of the area of rarefaction. *X*-ray at clinic in April; no cavitation but some amount of mottling on left side. On May 2, 1927, one film was taken during inspiration and one during expiration to see if any difference could be noted. There was absence of the annular shadow.

The following are the interesting points which this case brings to me: (1) This annular shadow disappeared and reappeared in a period of three months and then disappeared again. (2) In its wake it left no definite evidence of its having been present. No fibrosis or calcification could be diagnosed. With a healed cavity one would expect to find a dense area of fibrosis. (3) Sampson, Heise, and Brown stated that absence or marked diminution of lung markings inside an area or areas of rarefaction is the most dependable sign and if the size and position of such an area or areas are taken into account a diagnosis of cavity can be made with much assurance. This annular shadow seems to have had all these qualifications; nevertheless, it has behaved most strangely for a cavitation. (4) The behavior of this annular shadow would seem most to suggest Amberson's hypothesis of a simple subacute or acute pleurisy. (5) The patient has made a splendid recovery; has been doing light housework for a period of six months, has thrived under it, and has shown no symptoms. The question arises as to whether or not an artificial pneumothorax should have been pressed upon her at the early period assuming this annular shadow to be cavity. Would the result have been better?

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PROCEEDINGS OF THE MINNESOTA ACADEMY OF MEDICINE

Meeting of December 14, 1927

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town and Country Club, on Wednesday evening, December 14, 1927. Dinner was served at 7 P. M., and the meeting was called to order at 8 P. M. by the President, Dr. John E. Hynes. There were 32 members and one visitor present.

A committee, consisting of Dr. George Senkler, Chairman, Dr. John Armstrong, and Dr. C. N. McCloud, was appointed to draw up suitable resolutions on the death of Dr. Anton Shimonek, a fellow member.

The scientific program of the evening consisted of case reports and papers, as follows.

Dr. E. L. Tuohy (Duluth) reported a heart case and showed specimen.

This showed calcareous aortic valve cusps, aortic stenosis and insufficiency, with extreme cardiac hypertrophy.

This is a 1,120 gram heart, but if it showed nothing more than its size I would not present it. But a man, 44 years of age, in apparently good health, fourteen months ago consulted me. He gave no history of rheumatism or syphilis, but he had a diastolic murmur, an aortic insufficiency, and a very loud systolic murmur heard over the aortic area; he complained of hoarseness and had raised blood on two or three occasions, not large amounts, however. His diastolic pressure was reduced a little, and the systolic pressure moderately elevated. There was no history, as I have said, of rheumatic fever.

Because of the aortic insufficiency I naturally thought of syphilis, but four or five blood Wassermanns taken were negative. He was given antisyphilitic treatment on suspicion, in any case, from which he received no benefit.

X-ray studies made at that time were fluoroscopic, as there are no plates on file. However, plates taken two weeks before death show a large heart, both to right and left. When first seen, the fluoroscopic examination was somewhat indicative of syphilis, in that the ascending aortic arch bulged slightly to the right.

He was studied ten months later at Rochester, where it was stated they studied him carefully,—made spinal punctures, etc.—with no evidence of syphilis. He then had some spitting of blood and extreme dyspnea, as his condition grew worse.

This heart falls into a typical group described by Monckeberg, and brought to our attention first by Drs. Bell and Clawson* of the University of Minnesota. The weight of this heart (1,120 grams) is obviously made up from the huge and massive muscle. It is the type of concentric enlargement that spells enormous overwork. Interestingly and characteristically, there is a perfectly soft, pliable aorta, but absolutely calcified aortic cusps.

Those of you who are interested should read the splendid contribution of Drs. Bell and Clawson, and look up their references. At one of our special Heart Society meetings, Dr. Clawson asked the clinicians present to be on the lookout for this disorder, in order to assist in interpreting the sequences that lead up to the extraordinary incapacitating heart lesion.

The mechanical factors leading up to the globular concentric hypertrophy have long been fully understood, once aortic stenosis of high grade is established. Allbutt, years ago, emphasized the protective influence this lesion gives the aortic wall, saving it from the force of vigorous unloading of an overfilled and enlarged left ventricle, so often seen in pure aortic insufficiency and hypertensive states. But why the localization of so much chalk in the valve cusps? This is still a mooted point, and Clawson seems to lean toward a primary infectious or rheumatic damage to the valves, followed later by the disastrous deposits. It is to be noted that as usual, for the entity, this man developed it at least a decade before the usual extensive atherosclerotic deposits are expected, and he didn't have them in the usual sites elsewhere. Hence, we are led to suspect some local damage precipitating the degenerative avascular trends, and the result thereafter is all mechanical. Certainly syphilis plays no part.

A year ago Dr. Henry Ulrich, of Minneapolis, in giving a report of his work, stated that clinicians were rather too loath to diagnose aortic stenosis. So much error has crept into the over-diagnosis of systolic murmurs at the base of the heart that there is good cause for hesitation in assuming the presence of true stenosis. Nevertheless, we have other clinical signs abundantly confirmatory of this lesion, not to mention the classical fluoroscopic and Roentgen silhouette and, as demonstrated in this instance, we should be more courageous in making the diagnosis. With particular attention to the curious calcareous valve cusps here found, we should realize that, in addition to customary rheumatic disease or syphilis, we have a third etiologic agent to conjure with in aortic valve disease.

Dr. A. Schwyzer (St. Paul) reported two cases as follows:

(a) The case is that of a woman with a tumor in the pelvis and another in the right pubic area. One doctor thought it was malignancy in the pelvis with metastasis in the inguinal gland. However, we found that the tumor in the pelvis was probably a fibroid of the uterus. It was the size of a grapefruit. The tumor which was in front of the right inguinal and pubic region seemed to me to be adherent to the right inguinal ring. It was about the size of a man's fist.

We made an exploratory incision and found a fibroid, much larger than shown in the diagram here. The uterus was unicorn. There was no tube or ovary on the right side. On the left side there was a large hydrosalpinx and a normal ovary. On the right side one could see in the depths of the pelvis a large band running up retroperitoneally from the uterus to the inguinal region. The pubic tumor was very tense, cystic. It was a hydrocele. The solid part in it was the right ovary with two walnut-sized cysts. In the solid tissue between the two cysts we found (microscopically) ovarian structure. The pedicle was quite vascular and fleshy. The thick and fleshy round ligament went off into this ovarian pedicle. Here we had a descent of the ovary rather exactly as in the male the testis descends.

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*Bell, E. T., and Clawson, B. J.: "Comparison of Acute Rheumatic and Subacute Bacterial Endocarditis," Arch. Int. Med., 37: 66-81, April, 1926.

(b) Another case of interest is that of a man 55 years of age. He had had stomach trouble more or less all his life. His real misery dated from October 1, 1926, when he had been at a banquet and had had too much to eat and drink. He vomited, and since then he had been feeling bad. Dr. Schons made *x*-ray plates, and a tumor in the duodenum was prettily demonstrated. The *x*-ray plates showed a filling defect near the pylorus (plates shown) and this showed up in all the plates. Dr. Schons made a Cole-Graham test of the gall-bladder, and we learned this organ did not function. Dr. Lepak then referred the case to me. It seemed that the patient had as much trouble from the gall-bladder as from the tumor; at least the symptoms impressed me in this way.

On opening the abdomen we found that the duodenum was thickened, and it felt as if it contained a coiled-up tapeworm. We then remembered the *x*-ray plates, and forced the mass up and found it entered partly through the pylorus. The duodenum being far over on the side, it was much easier to approach the mass from the stomach, which we did. A gastrostomy of a length of about 5 cm. was made. Part of the tumor had been pushed into the stomach. The pylorus was now held open by small retractors. We found the attachment of the tumor just beyond the pylorus, running from the lower aspect of the pyloric ring down for about 1.5 cm. The pedicle was clamped and the whole tumor (6-7 cm. long and as thick as one's thumb) was taken out. We then took the gall-bladder out and closed the abdomen tight. The gall-bladder wall contained streptococci.

The patient is free from untoward symptoms after a very smooth recovery. We took the gall-bladder out partly on account of the fact that the history pointed that way and because the gall-bladder was found to be adherent from top to bottom. On the upper aspect of the liver there was a large white area. The cystic duct felt firm, like a cord. We could not make out any enlarged glands.

Dr. H. W. Jones (Minneapolis) gave a further report on the case of a man who was injured by a derrick falling on him, causing a rupture of the diaphragm. (First reported at the meeting of September 15, 1926.)

This man (patient presented) is a case I reported on two or three times before, who was crushed by a derrick. His shoulders were pushed down to his hips. When he was brought in, from his neck up he was just as black as could be—purple—and was bleeding from both ears, with hemorrhage into the conjunctivæ, and just about dead. We simply tried to sustain him and build him up, and after he got some better we started to *x*-ray him. The *x*-ray report was that he had hydrothorax. We put needles in, but could not get any fluid out, so finally began studying him over to see what we could find and, on giving him a barium meal, found this condition.

X-ray of plate 1. This plate shows the stomach above the diaphragm and in the right chest. We could see the meal pass from the esophagus, which was in normal position, up into the right chest.

X-ray of plate 2. This, taken later, shows the stomach and small bowel in the right chest.

X-ray of plate 3. A barium enema was given, and here is the large bowel above the diaphragm, almost to the second rib. The liver is under the diaphragm. The large bowel passes almost directly from the sigmoid flexure to the second rib on the left side and from there almost directly to the normal position of the appendix.

We opened the abdomen to see what the conditions were. We found the entire diaphragm on the left side was gone. The space between the abdomen and right chest was apparently entirely open. There was a little rim of diaphragm on the front and back. The heart was pushed over on the other side. When we got in there we were not bothered much by the heart because it was not in the left chest. As we tried to operate on him he stopped breathing for a while. When we found such an extensive damage to the diaphragm we realized that we could not close the hole without liberating the ribs. We resected five ribs near the spine and then allowed the wound to heal, and then operated by means of a long incision parallel to the seventh rib, detaching the sternal attachment of the ribs at the sternal end of the incision. This allowed us to press the ribs with the anterior attachment of the diaphragm towards the back, which allowed an easy closure of the diaphragm.

The incision was a very long one, and the heart was pushed well over to the right side. However, we had to start sewing the diaphragm at the bottom of the heart, and it was necessary to hold the apex of the heart out of the way to insert the first stitches. The difficult thing about the operation was a combination of trying to give him an anesthetic and working against the action of respiration and the heart all at the same time. During nearly all of the operations he would turn black from interference of respiration, and we would have to stop the anesthetic and wait until his respiration and circulation revived. Even with the ribs detached and this long incision it was difficult to hold the chest open. There were four of us working, and any one who tried to hold the chest open became completely exhausted.

We could not replace the viscera in the abdomen without making an extra-abdominal opening, and the final operation was for his hernia.

Plates taken following the large operation showed a development of hydrothorax, and this picture shows the tubes for drainage. The stomach is shown here below the diaphragm, and this later picture shows the liver, with stomach and bowels well below the diaphragm, and the heart has assumed practically a normal position. This (pointing) is the lung expanding.

DISCUSSION

Dr. A. Schwyzer: Where was the rupture in the diaphragm?

Dr. Jones: It was right across laterally. It seemed to start in the middle, running from the center at the spine to the left mid-axillary line. About one inch was attached to the posterior and one inch to the anterior. As we sewed it, it enlarged so as to cover the space entirely. There seemed to be nothing of the diaphragm except what was lying on the front and back. The hole was about as large as a head. It was clear that there was to be difficulty in holding the rib margins apart, but it was not so difficult to sew the diaphragm with the ribs freed.

Dr. Ulrich: How much function is in the diaphragm now?

Dr. Jones: I do not know. We opened the abdomen again about six weeks ago to repair the hernia in the abdominal wall. The stomach was up against the diaphragm. The patient has a lot of thickened pleura on the left side, but the lung is expanding.

Dr. H. E. Michelson (Minneapolis) read his thesis on "Leprosy." Photographic slides were shown.

Dr. E. T. Bell (Minneapolis) read a paper entitled "The Etiology of Hypertension."

Discussions by Drs. Tuohy and Gilfillan.

Meeting of January 11, 1928

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town and Country Club, on Wednesday evening, January 11, 1928, at 8 P. M. Dinner was served at 7 P. M.

The meeting was called to order by the President, Dr. John E. Hynes. There were 30 members present.

The minutes of the November and December meetings were read and approved.

Dr. J. M. Armstrong read resolutions on the death of Dr. Anton Shimonek, who died on November 23, 1927:

Dr. Anton Shimonek was born in Manitowoc, Wisconsin, September 4, 1855. He attended Rush Medical College, from which school he was graduated in 1879. After two years of practice at Beaver Dam, Wis., he went abroad, studying at Prague and Vienna.

In 1884 he returned to his home and shortly after came to St. Paul where he became associated with the late Dr. Gottlieb Stamm. He taught pathology at the St. Paul Medical College and for a number of years was Clinical Professor of Surgery in the Hamline Medical College.

He was a member of the Minnesota Academy of Medicine, and the County and State societies, the American Medical Association, and the American College of Surgeons.

Dr. Shimonek had a large following and did an extensive surgical practice, and was greatly loved and respected by his patients. He was rather retiring in nature and never sought to make himself conspicuous in any way. He was a good teacher and had the power to convey accurate knowledge to his students without waste of words. He had the general respect of the medical profession and when he expressed an opinion it was given careful consideration by his confrérés. His death was sudden, on November 23, 1927. He is survived by his wife, a son, and a daughter.

Be it Resolved, That it remains for us to offer to those who loved him best our sincere sympathy, and that a copy of these resolutions be sent to his bereaved family and spread upon the minutes of this Academy.

George Senkler, M.D., Chairman
John Armstrong, M.D.
C. N. McCloud, M.D.

A motion was carried that a copy of these resolutions be spread upon the minutes of the Academy and a copy sent to Dr. Shimonek's family.

The program of the evening consisted of two theses, as follows:

Dr. C. B. Wright (Minneapolis) read his thesis, entitled "Achylia and the Effects of Histamine." This was illustrated with numerous lantern slides.

Dr. C. E. Connor (St. Paul) read his thesis, entitled "Otitic Thrombophlebitis" (to appear in the May number of Minnesota Medicine). This was illustrated with lantern slides.

DISCUSSION

Dr. Colvin (St. Paul): As a peculiar coincidence I received to-day the marriage notice from the Pacific Coast of a young man whom I operated on in 1906 for sinus phlebitis, and yesterday I was asked to see a young man in the tuberculosis wards at the Ancker Hospital upon whom I operated the same year for sinus phlebitis accompanied by pyemia. Each of these cases shows the necessity for individualizing the treatment, and demonstrates some interesting pathology.

In the first case, a child of five years of age, there was suppuration of both mastoids with operation on both bones. After the first operation there was marked improvement; after the second operation the temperature remained irregularly high; exposure of normal sigmoid sinus on this side which, however, had to be obliterated for bleeding. A later operation was done on the side of the mastoid first operated on, and this was the side where the real trouble was and was manifested by a red streak down the neck. When the vein was exposed, the sense of touch was not sufficient at first to decide whether thrombosis was present or not. The deciding observation was the presence of fine filmy adhesions between the vein and its sheath.

On opening the vein a long clot was removed, which extended the whole length of the vein and was branched at the lower end as if it extended in both directions in the subclavian. The jugular vein was removed; the sinus was not opened, but the patient made an uninterrupted recovery.

The other case was brought to the hospital unconscious, with a diagnosis of pyemia. He had a suppurating knee joint and an abscess of his chest wall. These, it was proven, originated from an old infected middle ear, causing mastoid suppuration with lateral sinus and jugular-vein involvement. The conditions found, it seems to me, explain a number of the questions involved in the thesis and the discussion. The jugular vein and the lateral sinus were filled with pus, the vein being closed by adherent endophlebitis. After opening the vein, the sinus was opened and through-and-through drainage demonstrated. The patient made a slow but final convalescence.

About the same time I saw a man who, having an acute middle-ear suppuration, died with symptoms of general septic infection. He was not operated on because of the absence of any localizing evidence of mastoid or sinus infection. At autopsy no evidence of mastoid or sinus involvement was found.

During this period of my mastoid activity, I also operated on a woman seven months pregnant, for sinus infection, who developed empyema. She recovered from all of these things and was delivered of a healthy baby at term.

All of these cases impress me with the necessity, in these septic cases, of never giving up but to continue the fight and open up every new depot of infection as it occurs.

The reference to phlebitis of the extremities with their varying terminations is instructive, but the problem in sigmoid or lateral sinus or jugular phlebitis is rather different. The infection is near the center of things both as to brain and heart, and while, as my second case proves, adhesive localizing phlebitis may occur, it is certainly not the rule and the concensus of opinion among the aurists is, I think, that an aggressive radical attitude is the correct one. It is, however, interesting to note that frequently enough after these operations a septic character of temperature may exist for several weeks before recovery ensues.

Dr. Burch (St. Paul): I have enjoyed Dr. Connor's thesis very much. He has brought out an interesting problem. One of the things that impressed me was the importance of the anatomical relationship, and it recalled to my mind one of my earlier experiences. A man had multiple metastases when brought to the City Hospital. It was discovered that he had an otitis media. On opening the mastoid, I found that he had almost no mastoid, and the sigmoid sinus was almost in apposition to his antrum and was thrombosed. Similar anatomical conditions may be the reason for some cases of sinus phlebitis occurring early, and others late.

Dr. Connor (closing): I think the question of whether or not the jugular should be attacked and, if so, what should be done to it, is one of the things that offers a good deal of interest to the general surgeon and otologist. We do know that these cases get well sometimes without any surgery at all; nature does take care of the process.

Dr. Zimmermann spoke of simple incision of the vein. That too has been practiced by different men. I think that might be all right if one could always be sure of getting all the infection and be sure that the ends of the thrombi were sterile. The question is, what is a thrombophlebitis going to do? That is one of the arguments advanced by the people who advocate excision. It seems to me when one does have a definite phlebitis with changes in the vein wall, excision is giving that patient more of a chance. Dr. Schwyzer spoke of the aspiration of air, and that is one very great danger. I obliterate the jugular by ligature and thus block off the infection higher up.

About the question of attacking the sinus in the temporal bone: in one case I did not do it. I intended to, but the patient got all right so I did not. I went back and opened the neck. I think one should open the sinus in the temporal bone.

The meeting adjourned.

Carl B. Drake, M.D.
Secretary.

BOOK NOTICES

Old and New Viewpoints in Psychology. By Knight Dunlap, Professor of Experimental Psychology in the Johns Hopkins University. 163 pages. Price, $1.50. St. Louis: The C. V. Mosby Company, 1925.

This book of 163 pages contains three public lectures delivered at the Johns Hopkins University and two papers read by the author before the Southern Society for Philosophy and Psychology.

The material is presented in a simple, direct, easily understood style. The various trends in the field of modern psychology are referred to.

The chapter on mental measurements contains material that is profitable reading matter for the practitioner.

The "structuralist" group of psychologists is referred to as reactionary. The behavioristic psychology of Watson is considered by the author to be in reality more of a revolt against the behavior psychology of McDougall and the general progressive movements in psychology. We may note that the present-day psychological literature contains many lengthy, and frequently acrimonious, discussions between the so-called behaviorists and the group of which the author is a well-known spokesman.

"Freud and his disciples" the author states, "have contributed nothing of value to psychology, and if they have contributed anything to medicine it is rather discreditable to medicine to have been so far behind the progress of psychology that it could profit by this mixture of psychology and superstition." The "instinct" psychology is stated to be, "in effect, another manifestation of the same tendency which is exhibited in the old faculty psychology, and in the Freudian system: a tendency into which we all drop from time to time and which requires constant circumspection to keep out of." Obviously some of the statements of the author would be fiercely attacked by many of our leaders in the psychological sciences.

The chapters on psychology and spiritualism, psychology of the comic and the reading of character are essentially critical in that they treat of charletanry, of which there are so many evidences every day.

—Joseph C. Michael, M.D.

The Medical Clinics of North America. (Issued serially, one number every other month.) Volume xi, Number iii, (Tulane University Number, November, 1927.) Octavo of 210 pages with 46 illustrations. Per Clinic year, July, 1927, to May, 1928. Paper, $12.00; cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company, 1927.

This volume is contributed by Tulane University, of New Orleans. The first two articles consist of discussion of measles and scarlet fever, both very interesting and instructive. The third article by Dr. I. I. Lemann on the treatment of diabetic gangrene, is a very fine discussion. He attempts to show when and when not surgery is indicated in the treatment of diabetic gangrene. Amputation, he maintains, should be done under one of the following conditions:

1. Extensive and deep gangrene.
2. Moist gangrene.
3. Advancing lymphangitis.
4. Pain (unbearable and persistent).

At all times there should be the closest co-operation in the treatment of diabetic gangrene between physician and surgeon. Dr. O. W. Bethea has a very interesting paper on pleurisy, Dr. George R. Herrman has an extensive discussion on the subject of purpura as a cardiologic problem. He shows that heart disease may present purpura as a part of the clinical picture relatively early. Ten cases are presented with a discussion of the diagnosis, therapy, and results of each case. Dr. Leon J. Menville has a very good article on "X-Ray Diagnosis of Gall-Bladder Disease."

Other articles in this book are very interesting and taken as a whole the volume is very well worth reading.

—A. E. Cardle, M.D.

Diseases of the Mouth. By Sterling V. Mead, D.D.S., Professor of Oral Surgery and Diseases of the Mouth, Georgetown Dental School; Professor of Diseases of the Mouth, Georgetown Medical School; Oral Surgeon to Georgetown Hospital; Dental Surgeon to Providence Hospital. With 274 original illustrations in the text and 29 full page color plates. Price $10. St. Louis: The C. V. Mosby Co., 1927.

The importance of oral infections in relation to systemic disease challenges the interest of the physician, surgeon, and dentist. The manifestation in the mouth of systemic disease, such as leukemia, likewise indicates the necessity for knowledge of oral diease.

The text is written by a dentist and surveys the subject very well for that profession. The author includes discussion of tumors of the mouth and diseases of the tongue, salivary glands, and nasal accessory sinuses.

The text should aid the dentist greatly in recognizing disease conditions of the mouth. When it is considered that the dentist examines the oral cavity frequently and routinely, his aid to the physician and surgeon will be great in the early detection and treatment of disease that otherwise might be neglected by the patient.

—C. A. McKinlay, M.D.

Emergencies of a General Practice. By Nathan Clark Morse, A.B., M.D., F.A.C.S. Revised and rewritten by Amos Watson Colcord, M.D., Surgeon, Carnegie Steel Company. Second Edition. Cloth. Price, $10. Pp. 541, with 311 illustrations. St. Louis: C. V. Mosby Company, 1927.

This book is just what the title indicates. It is a common-sense statement of what should be done in all ordinary emergencies. The authors are evidently writing of things which occur frequently in their own practice. The book is copiously illustrated and the fewest possible number of words have been used in descriptions and explanation. It is a most valuable work for the general practitioner and the industrial surgeon. I would strongly advise all young men just beginning the practice of medicine to acquire and study this book.

—Wm. W. Moir, M.D.

MISCELLANY

GEORGE G. EITEL—RESOLUTIONS*

George G. Eitel, who died suddenly February 9, 1928, at the age of 69, had been for over thirty years an outstanding figure in the medical circles of Minneapolis and the Northwest.

He was born on a farm near Chaska, Carver County, September 28, 1858. After attending the district school and later the Moravian Academy in town, he first began the study of medicine in the office of Dr. J. S. Richardson. After a period spent in earning and saving enough money to pay his school expenses, in 1885 he entered the Minnesota Hospital College. Three years later he received his M.D. degree and was awarded first prize for scholarship.

Some time was spent in the clinics of Berlin, a year in the University of Pennsylvania, and two years in practice in Centralia, Washington.

In 1893 he came to Minneapolis and became an assistant to Dr. F. A. Dunsmoor and was appointed to the surgical staff of Asbury Hospital.

In 1900 he again went to Germany for a year of study, and received the degree of Doctor of Medicine from the University of Berlin in 1901.

Since then he has practiced continuously in Minneapolis; since 1912 in his own hospital, of which his wife was superintendent. In 1925 he built and occupied, with his associates, a fully equipped office building, in close proximity to the hospital.

(Continued on page 157)

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*Read before the Hennepin County Medical Society at its regular monthly meeting of March 5, 1928.

THE
JOURNAL-LANCET
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Minnesota, North Dakota, South Dakota and Montana
The Official Journal of the
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The Hennepin County Medical Society
The Soo Railway Surgical Association
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MINNEAPOLIS, APRIL 1, 1928

BOOSTING MEDICINE

The magazine of the Minneapolis Civic and Commerce Association which is shortly forthcoming will contain a large number of pages devoted to medicine and medical attainments in Minneapolis, including articles which will refer to many other towns in the state. So it is really a boost for medicine all over Minnesota, as well as definitely for Minneapolis. For instance, a survey is to be made of all the hospitals in Minneapolis, a short history of their beginning, the number of beds they contain, the equipment, the method of caring for patients, and, in some instances, the results of their work—all very legitimate and perfectly ethical.

This is done in part for the development of the hospital situation, and it probably will attract a good deal of attention as it may be possible to distribute the magazines very widely. A survey of the hospital situation from many angles has never been undertaken here before, and it is about time we knew and the people about us knew how many beds were available in Minneapolis for the sick, and of the kind of hospitals the people are patronizing. To further improve the situation there is to be a meeting of the Minneapolis Hospital Association, and we may be able before long to present some definite information from the hospital superintendent's point of view. There is no harm, at least, in knowing what the situation is, and how many beds are occupied or unoccupied and how many people are employed about these institutions. It may be of distinct benefit to the person who does not believe very much in medicine, hospitals, or doctors. Very few people know how much time physicians give to hospital cases and how closely they are watched and also few remember there is an enormous amount of charity work done by hospital staffs. Some people are indifferent enough to think that if a man is appointed on the Minneapolis General Hospital staff that he draws a large salary. As a matter of fact, he sacrifices his own time and his own convenience, for which he gets no pay whatever. But that is a hard thing to make the people understand or even believe.

It is quite probable that the publishers of this magazine will, for the time being, have a number of extra copies that may be desired throughout the state: and if anyone needs an extra copy or wants a copy of the report, a line dropped to the Minneapolis Civic and Commerce Association will bring them one. The expense of issuing the magazine lies mainly in the setting up and illustrating, and it takes very little more to print 6,000 or 8,000 copies than to print 4,000—the additional expense is very little greater. It is quite a different matter than the making up of reprints, for that means a different printing although the setting-up is the same.

The Publicity Committee of the Hennepin County Medical Society is very earnest about this matter of increasing information concerning the facilities at home.

"ABOUT MEDICAL ETHICS"

We reprint here, without authority but with due credit to J. Newman Morris of *The Medical Journal of Australia*, what he thinks about medical ethics and which will explain, perhaps, in a way some of the things which have been said before concerning hospitals and facilities of this type. This is reprinted from the *American Medical Association Bulletin* of February, 1928; and it seems so reasonable in its statement that it is hoped all of our readers will enjoy it:

"The promotion of the medical and allied sciences, the maintenance of the honor and interests of the profession, the formation of a bond of union, the promotion of fair and honorable practice, the establishment of principles of ethics, and all other objects of this society have for their main objective the better performance of service to those in need of it. It is because of this objective that we do not deserve the charge of being the strongest of trade unions. Hippocrates laid down the ethical and civic relationship of the physician to his patient and to the public and down to the present day the principles of that relationship have ruled medical conduct. John St. Loe Strachey in 'The River of Life' has this to say:

" 'I say, without the slightest fear that I may be overstating my case, that there is no profession which is more exposed to the temptation to forget honor, humanity and kindliness than the medical profession and none in which the exploitation of human suffering is easier. Yet there is none in which the temptation is so triumphantly withstood. Let this be remembered by the public when they feel inclined to sneer at medical etiquette and to speak of it as if it were a code for maintaining selfishness and enrichment. Medical etiquette is the salvation of the patient. It is the one thing which stands between him and the dangers of exploitation. It is what makes him and his sufferings hold the dominant part in the dread dramas of pathology.'

"That is a layman's view of the working of medical ethics, a view which is none too common or often expressed, but is, as we know, a true statement of the position. It is not contrary to our code of ethics nor to any other ethical principle that the members of a society, having as its main objective the doing good to others, should in furtherance of that objective protect and advance their own interests. Sydney Webb in 'The State and the Doctor' says with regard to the interests of the medical profession:

" 'It is not that the doctors put forward any claim that their private interest should be upheld at the cost of those of the whole community. But it is necessary for the welfare of the community that there should be a strong, competent and adequately remunerated medical profession.' "

MEAT

This again brings up the subject of diet. "What is good for one man is no good for another," so the average person thinks, and, of course, in many instances there is a large disagreement between physicians as to what some people ought to eat and what they should not eat. It is quite true that in certain diseases, certain physical conditions, people have to deny themselves of substances which would interfere with their recovery (perhaps) or would interfere with their disease in some manner of ways. Again, we refer to the fact that there are some people seeking reduction from excessive weight and others are trying to put on a little excess fat because they are very slight and of narrow build. All of this may be all right in certain instances, but the instances are very few in that many people reduce by improper methods and find themselves as fat as they were when they started their reduction process; and the same is true of the lean individuals,—at the end of a certain number of weeks they are as lean as they were before. Why? Because they are built that way; because they are endowed with certain inherent functions which makes them either lean or fat.

It is presumed that the average individual keeps up an average weight, and he gets along on a plain, wholesome diet. And as he gets older he finds that his dietary is reasonably reduced. He is fitted into a condition of digestive chemistry that tells him when not to eat the fat and when to eat the lean, and he knows instinctively that he must curtail or increase his food intake. The curtailment process seems to us to be the most important, that is, when people reach 65 or 70 years of age they need less quantity in the food line and can get along with less of the heavy foods that formerly they thoroughly enjoyed. For instance, to take a concrete example, the man who is reasonable about his food will as he gets older eat less meat simply because he feels that he does not need such stimulating diet. Yet, on the other hand, people over the 80's are often rigid meat-eaters, and they eat without any regard for cause or effect. So some people are constituted so that they can violate most of the food rules and still not suffer the consequences. But the man or the woman who eats to get fat and continues to add to his or her weight ought to be reasonably careful. Yet, as this is written, the editor finds himself thinking of others who are in the 60's and yet eat enormously, often taking two helpings, at one meal, of everything on the table, yet seem to be very well. They may be inconvenienced in some ways, but on the whole they consider themselves pretty well.

In order to prove or disprove benefit or harmfulness of meat, Vilhjalmur Stefansson, the arctic explorer, has recently been through a number of weeks, under observation by dieticians and doctors, in New York during which he has subsisted entirely upon meat, eating nothing else of any sort. He claims and we have no doubt his claim is perfectly good, that he has suffered no inconvenience whatsoever. Perhaps his former arctic training, when he was obliged to eat blubber with the Eskimos, gave him reasonable satisfaction, and then his experience in exploring the arctic regions has put "pep" enough in his determination to find out what a meat diet would do. Very few people could emulate him or follow in his footsteps.

One of the ideas of this editorial is to discuss the necessity of rigidity in diets and to suggest to the people in general that there is more fuss made over diet than most of the other methods put together, and we sometimes wonder at the extremes to which people will go in order to follow a dietary and the outline of it, for we know the conditions prevailing in countries through which people travel by stage or oxcart, or even automobiles, sometimes are such that they have difficulty in getting a variety of food; and hunters and trappers, as well as explorers, subsist on a few very simple foods. But they are out of doors and exercising, and their digestive tracts are probably in perfect order, and they have no trouble. If we could only make our patients see the error of their ways sometimes and the folly of their diet lists, there would be fewer people restricted as to variety of foods.

In an editorial in the March seventeenth issue of the *Journal of the American Medical Association* the question is brought up as to the practical aspects of low residue diets, and the opening sentence is that dietetics is singularly subject to all sorts of fads and foibles. It further states that perhaps the greatest dietetic errors rest on the implicit assumption of many untutored persons that all alimentary tracts are essentially alike. Accordingly, if the dictum that "constipation is a national ill" meets with popular acclaim there is a real danger that hundreds of delicate intestinal canals deserving the mildest of treatment will be insulted by a bombardment of roughage or laxative pills. Hosoi, Alvarez, and Mann of the Mayo Clinic, in an article in the *Archives of Internal Medicine,* have recently remarked that there are many occasions when physicians wish to use a diet with the least possible residue, particularly in the treatment of patients with diarrhea and following operations about the rectum or anus. They find that among those with the least residue are gelatine, sucrose, dextrose, concentrated broth, hard-boiled egg, meat, liver, rice, farina, and cottage cheese. Among those with the largest residue are fruits, potatoes, bread, lard, butter, Swiss cheese, soft-boiled egg, raw egg albumen, milk, and lactose. They have come to the conclusion, too, that the rate of passage of many foods into the large intestine in which the mucous membrane of the colon absorbs little beside water elements must be considered. This, of course, is in the treatment of disease. But the normal people who go about their business with little thought of their digestive apparatus, and who are reasonably sensible in what they eat, are quite unconscious of the fact that they have an abdominal tract.

(Continued from page 154)

Dr. Eitel was a Knight Templar, a Scottish Rite Mason, a Noble of the Mystic Shrine, a member of the Elks Club, the Automobile Club, the American Medical Association and the American College of Surgeons. At one time he served as first vice-president of the State Medical Association.

Quiet, kindly, unassuming, shy about speaking in public, Dr. Eitel had not a trace of bombast nor self-adulation. "Dr. Eitel achieved material success, but material success never for an instant chilled the warm and generous and humane impulses of the man," states an editorial in a leading newspaper.

Among his legacies to the people of the Northwest are the beautiful hospital which bears his name and the generous fund left to the University for the education of worthy students.

His influence has been directly felt in every village and city of our state and its neighbors through his ministrations to the sick. Extraordinary numbers have felt the sorrow of his loss, and have said with real emotion "He gave me help when I needed it."

THE NECROLOGY COMMITTEE.

G. T. PLOWARD

Folks may praise the nerve of Lindbergh
Because he spanned the sea,
And rave about the bravery
Of Gertrude Ederle;
But there's really just *One Hero*
Who ain't a bloomin' coward,
And that's an Excavator
By the name of G. T. Ploward.

He explores the Molar Regions,
And invades the Sinus Zone,
Does a nose-dive into Antrums,
Digs canals thru solid bone!
He chisels nifty fairways
Thru the great big open spaces
Where germs are germs, and hide behind
Folks' funny-looking faces.

So, having owned a well-trained germ
Until this Christmas time,
I want to say, "I thank you"
In this funny little rhyme;
I can't send wreaths of laurel
Nor pin medals on your chest
But, believe me....I am grateful
Because....you've *killed* the Pest!

G. L. S.

NEWS ITEMS

Dr. E. F. Dixon has moved from Troy, Mont., to Big Sandy, Mont.

Dr. M. Kerlan has moved from Moose Lake, Minn., to Bemidji, Minn.

Dr. D. W. Gross has moved from Frankfort, S. D., to Iroquois, S. D.

Dr. C. M. Carlaw, wife, and daughter, of Minneapolis, have gone to Havana for a vacation.

Dr. G. Elmer Strout, of Minneapolis, accompanied by his wife and daughter, is taking a trip to Honolulu.

Dr. H. C. Lund, a recent graduate of Northwestern, has joined the staff of the Home State Hospital at Lead, S. D.

Dr. C. D. Harrington, of Minneapolis, accompanied by his wife, is taking a trip through the Panama Canal.

The Men's Building of the General Hospital of the Indian Agency at Onigum, Minn., was destroyed by fire last month.

The public schools of Albert Lea (Minn.), a city of 10,000 inhabitants, are closed on account of the prevalence of influenza.

It is now hoped that Dr. A. Einar Johnson, of Watertown, S. D., is practically out of danger after a very critical surgical operation.

Dr. Carl A. Feige, of Iroquois, S. D., has sold his practice to Dr. D. W. Gross, of Frankfort, S. D., and will move to Huron, S. D.

It is now quite definitely known that the Asbury Hospital of Minneapolis will be retained for a long time as a U. S. Veterans' Hospital.

Dr. Martin L. Murphy, of Browerville, Minn., died last month at the age of 70. Dr. Murphy graduated from an Indiana medical college in 1892.

Dr. Louise O. Kappes, of the Mayo Clinic, announces the opening of offices at 708 Church Street, Evanston, Illinois, for the practice of pediatrics.

Dr. J. Gaston Gay, of the Mayo Clinic, announces the opening of his offices for the practice of surgery at 104 Ponce de Leon Avenue, N. E., Atlanta, Georgia.

The University of Colorado School of Medicine will conduct a post-graduate course in neuropsychiatry throughout the month of July in Denver.

Dr. J. A. Myers, of Minneapolis, spoke before the Jackson County Medical Society at Kansas City, Mo., on March 13, on the Hospitalization for the Tuberculous.

Dr. S. Marx White, of Minneapolis, was elected second vice-president of the American College of Physicians, at its annual meeting in New Orleans last month.

The business men of Isanti, Minn., have undertaken to raise money to build a hospital in that city. The amount wanted is $25,000, which can be easily raised by subscription.

Dr. F. P. Frisch has moved from Bismarck, N. D., to Willmar, Minn. Dr. Frisch is an eye, ear, nose and throat specialist and is a graduate of the Medical School of the U. of M., class '14.

Dr. Stuart H. Shippey, of the Mayo Clinic, has opened an office at 1205 Medical Arts Building, Atlanta, Georgia, for the practice of internal medicine, especially gastro-enterology.

The Hutchinson (Minn.) Community Hospital closed a successful year last month. It is a debt-free and tax-free institution, possessing the good-will of the entire community.

Dr. J. M. Arnson, who has been associated with Dr. Oliver of Graceville for several years, has moved to Benson. Dr. Arnson is a graduate of Northwestern and has studied abroad.

The Medical School of the University of Minnesota graduated a class of 39 students last month, 29 of them taking the B.M. and 10 the M.D. degree. There was one woman in the class.

Dr. W. A. Fansler, of Minneapolis, presented a paper on "Non-malignant Tumors of the Rectum" before the March meeting of the Stutsman County Medical Society of North Dakota, held at Jamestown.

For the week ending March 3 the mortality rate of Duluth was 8.5 per 1,000, which was the lowest in a group of sixty-eight cities, which with a total population of 30,000,000 (thirty million), gave a mortality rate of 14.5

The number of cases of contagious diseases in Minneapolis, according to the City Commissioner of Health, is smaller than at any time in recent years. There are only 24 cases of diphtheria and 80 cases of scarlet fever in the city.

A summer tour in Europe has been planned by the American Doctors Clinic and Golf Association, concerning which information may be obtained from the Secretary of the Association, Dr. J. L. Smith, 2312 No. Sawyer Ave., Chicago.

The scientific and commercial exhibit to be made at the American Medical Association in Minneapolis in June will be the largest exhibit of the kind ever brought together. All space in the rooms set aside for the exhibit was taken some time ago.

The Madison District Medical Society of South Dakota met at Madison last month. Papers were presented by Drs. G. R. Albertson and J. C. Ohlmacher, of the State Medical School; Dr. D. S. Baughman, of Madison, and M. C. Haecker, of Aberdeen.

Dr. N. P. Gearhart, of Huron, S. D., died on March 14 at the age of 67. Dr. Gearhart was a graduate of Drake University, College of Medicine, DesMoines, Iowa, Class of '85, and had practiced in the state of Texas and in Pierre, S. D. He came to Huron three years ago.

Dr. H. A. Myers, of the U. S. Veterans' Bureau of Fargo, N. D., is called to Washington, D. C., to take a 90-day course in clinical pathology. Dr. Campbell Sansing, of Dallas, Texas, and formerly of Devils Lake, N. D., will take over the work of Dr. Myers.

The Goodhue County (Minnesota) Medical Society held its annual meeting in St. James last month, when the following officers were elected: President, Dr. L. A. Steffens, Red Wing; vice-president, Dr. H. P. Sawyer, Goodhue; secretary-treasurer, Dr. S. H. Anderson, Red Wing.

The construction of the first unit of the new addition to the Swedish Hospital of Minneapolis will begin very soon. This addition will cost nearly $500,000 and will add 100 beds to the capacity of the hospital. The cost of the improvements planned will reach a million dollars.

The Watertown District Medical Society of South Dakota met last month at Watertown. Dr. S. M. Hohf, president of the State Medical Association, gave an address on "Medical Economics." Dr. R. D. Alway, of Aberdeen, spoke on "A South Dakota Doctor in Europe", and Dr. J. F. D. Cook, of Langford, secretary of the State Association spoke on "The Purposes and Policies of the Association."

A physician in a South Dakota city makes the unique announcement that he is the first physician in the city to receive a new Ford. Certainly it is ethical advertising if he does not mean to say that he can reach patients sooner than other physicians. Call him before the Sanhedrin!

Dr. Pearl D. Winship, of Park Rapids, Minn., died in February at the age of 88. Dr. Winship was a graduate of the College of Physicians and Surgeons of Keokuk, Iowa, class of '78, and had practiced in Park Rapids since 1887. He was a Civil War veteran and was attached to President Lincoln's body-guard.

Dr. J. S. Hammond, of Butte, Mont., died last month at the age of 84. Dr. Hammond was a graduate of the Cooper Medical College of San Francisco, Calif., class of '73, and had practiced in Butte for forty-five years, having formerly practiced in California and Nevada, thus being a pioneer of three states.

The physicians and dentists of McLeod County (Minn.) meet annually for a joint banquet and then hold separate scientific meetings. At the last meeting of the McLeod County Medical Society the following officers were elected: President, Dr. T. J. Trutna, Silver Lake; secretary-treasurer, Dr. A. H. Jensen, Hutchinson; delegate, Dr. Trutna.

The Southern District Medical Society of North Dakota held a meeting in Edgeley on March 16,—The following officers were elected: President, Dr. H. R. Gundermann, Monango; secretary-treasurer, Dr. F. W. Fergusson, Kulm; censor for 3 years, Dr. G. B. Ribble, LaMoure; censor for 2 years, Dr. C. J. Meredith, Marion; censor for 1 year, Dr. J. E. Scanlon, Edgeley; Delegate to the State meeting at Devils Lake, Dr. C. J. Meredith.

Dr. Jay A. Myers, of the Department of Preventive Medicine and Public Health at the University, has been giving a series of talks to nurses in Minneapolis hospitals on the early diagnosis of tuberculosis campaign now in progress throughout the nation. Nurses at the Swedish Hospital, Asbury Hospital, Deaconess Hospital, and the North Western Hospital have heard the talks. The film, "The Doctor Decides," specially prepared for doctors and nurses, has also been shown at the conclusion of Dr. Myers' talks. This series of lectures has been given under the auspices of the Hennepin County Tuberculosis Association.

Annual Meeting of the Cheyenne Valley Medical Society of North Dakota

At the March meeting of the Cheyenne Valley Medical Society of North Dakota, the following officers were elected for the ensuing year: President, Dr.

A. C. MacDonald; vice-president, Dr. C. E. Spicer; secretary-treasure, Dr. Will H. Moore, all of Valley City. Dr. E. A. Pray, of Valley City, was elected delegate to the State Association meeting, with Dr. P. M. Kellogg, of Rogers, as alternate.

Will H. Moore, M.D.
Secretary

Southwestern District Medical Society of North Dakota

This Society held its annual meeting at Reeder, N. D., on March 3, when the following officers were elected for the current year: Honorary president, Dr. J. E. Schneider, Bowman; president, Dr. W. G. Wendell, Marmarth; vice-president, Dr. F. J. Cornelius, Bowman; secretary-treasurer, Dr. J. L. Dach (re-elected), Reeder; delegate, Dr. O. Lemieux, Bowman; alternate, Dr. A. A. Whitemore, Bismarck.

The next meeting will be held at Hettinger, in June, prior to the meeting of the A. M. A., in Minneapolis.

J. L. Dach, M.D.
Secretary

Staff Meeting of the Swedish Hospital

Future building plans of the Swedish Hospital were discussed by Dr. A. E. Johnson at the February meeting of the Staff held in the Hospital lecture room on February 13th. Preliminary plans have been prepared for a new building facing 8th Street and Elliott Park and covering the whole width of the block between 9th and 10th Ave. So. The building is "T" shaped with the service and mechanical equipment centralized in the rear wing towards 7th Street. Construction will begin this spring and a committee was appointed from the Staff by Dr. Soren P. Rees, Chief of Staff, to supervise the plans.

Presentation of recent hospital cases of interest were given by Dr. Soren P. Rees as follows:

(a). Acute miliary tuberculosis with remarks on the autopsy findings by Dr. Charles R. Drake.

(b). Acute hemolytic streptococcic pleurisy in a child with remarks on the rib resection and prognosis by Dr. Edwin Moren.

(c). Neuro-syphilis in a middle-aged woman who three years ago had several attacks of epileptic seizures with prolonged periods of unconsciousness and permanent loss of mental powers. Subsequently she was treated for two weeks with malaria inoculation and gave birth a month ago at the Hospital to a healthy child. The clinical forms of central nervous system lues were discussed by Dr. Julius Johnson and the prognosis of children of syphilitic parents was fully stated by Dr. F. L. Adair.

(d). A patient of middle age with auricular fibrillation and cardiac decompensation due to hyperthyroidism of thirty years duration was shown by Dr. Rees and the good results of rest, carefully measured food, digitalis, and Novasurol were demonstrated.

C. A. Hobbs, M.D.
Secretary

North Dakota Practice for Sale

A $6,000 cash practice and a paying drug-store in connection. Address 464, care of this office.

High-Grade Stenographer Wants Work

A high-grade stenographer with four years experience in medical work desires a position. Can give best of references. Address 457 care of this office.

Physician Wanted

Fine opening for physician. Large territory; well-settled locality; nearest competition 32 miles east, 14 miles west, 28 miles north, 50 miles south; population of town 500. Address the Tioga Commercial Club, Tioga, N. D.

Managerial Position Wanted

As business manager with firm of doctors or clinic. Have had ten years experience as business manager for group. Thoroughly familiar with professional and financial end of work. References given. Address 461, care of this office.

X-Ray and General Laboratory Work Wanted

A graduate laboratory and *x*-ray technician wishes a clinical or hospital position. Can do all routine laboratory work including blood chemistry, Wassermanns, and tissues. All general *x*-ray work including therapy, also am a graduate nurse. Best of references. Address 458, care of this office.

Office Space for Rent in Central District of Minneapolis

Two beautiful rooms and reception room in common with a group of physicians. Access to *x*-ray and clinical laboratories and metabolism apparatus. Free parking space for doctors' and patients' automobiles. Fifty dollars a month, or on a percentage of income. Address 466, care of this office.

For Sale

Fully equipped, well-located office. Exceptional opportunity for some doctor. Town 7,500; hospital connections, Victor *X*-ray machine; Acme Diathermy; Burdick Quartz Light, water and air cooled. Complete genothalmic optical unit. Wish to dispose at once. Doctor deceased. Terms to suit. Write for further particulars. Mrs. P. C. Davison, Willmar, Minn.

Practice for Sale

In Southern Minnesota. $25,000 medical and surgical practice; county-seat; population 4,000; city hospital; complete up-to-date office equipment with 10,000 case records, by two men in partnership established seven years. Practice and equipment sacrificed to purchasers of modern residences. Or will sell equipment and practice separately. Will introduce. Liberal terms. Address 465, care of this office.

Position Wanted

By a woman registered *x*-ray technician, graduate in clinical laboratory work, experienced in physiotherapy, metabolism, some hospital nursing, operating room technic and anesthetics. A No. 1 book-keeper, experienced in business management, secretarial work, histories, etc. Ten years experience in hospitals and clinics with fifteen years business experience. Prefer business management or *x*-ray work but will combine to suit employer. Excellent references. Address 462, care of this office.

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MEDICAL MANAGEMENT OF GOITER*

By JULIUS O. ARNSON, M.D.
From the Medical Section of Quain & Ramstad Clinic
BISMARCK, NORTH DAKOTA

In classifying the pathology of thyroid function, Marine divided the subject into two groups:

- I. Thyroid insufficiencies:
  - a. Simple goiter (endemic, epidemic, sporadic)
  - b. Myxedema
    - 1. Infantile (cretinism),
    - 2. Adult (Gull's disease).
- II. Thyroid over-activity—Graves' disease.
  - Hyperthyroidism
  - Thyrotoxicosis
  - Dysthyroidism
  - Exophthalmic goiter

From the standpoint of abnormal function, this classification is interesting. Plummer's classification, employing an anatomical as well as a functional basis, has been more widely accepted than any other and enters into the discussion in this paper because of the place the adenomata occupy. It is as follows:

1. Simple colloid goiter
2. Adenoma without hyperthyroidism
3. Adenoma with hyperthyroidism
4. Exophthalmic goiter
5. Tuberculosis, malignancy, syphilis, thyroiditis, etc.

The thyroid gland is concerned in the metabolism of iodine. Kendall first isolated the active principle of the thyroid hormone, thyro-oxy-indol, abbreviated to *thyroxin,* which contains 65 per cent of iodine. The administration of thyroxin is attended by evidences of increased metabolism and its action is based on the assumption that the continued presence of thyroxin in the tissues is necessary for a considerable period to call forth a physiological response. When thyroxin is given in several successive daily doses there is an increase in pulse rate, nervous irritability, tremor, increased appetite, and, later, nausea and diarrhea. The symptoms that attend exophthalmic goiter cannot be produced by the thyroxin alone, indicating that the primary disturbance is not in the thyroid, but is probably due to a long-continued stimulation to the thyroid resulting in the breaking down of resistance to the hormone. In exophthalmic goiter the organism has the ability to remain in a hypertrophied condition, while in experimental hyperthyroidism the normal animal cannot continue to respond to the thyroid hormone in a similar manner.

The presence of iodine in the thyroxin molecule exerts a specific influence in general tissue metabolism probably rendering active groups more reactive. These active groups in the thyroxin molecule are a necessary mechanism for the production of energy within the body. There exists an equilibrium of thyroxin in the thyroid gland, in the blood stream, and in the tissues, and the thyroxin content of the tissues varies with the energy demands of the body. Iodine is found in the lungs, liver, kidneys, central nervous system, adrenals, spleen, lymph nodes, muscles, hair, and thymus, as well as in the thyroid gland, and the iodine content varies in different localities and under different conditions, there being three times more iodine in the summer than in winter.

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*Presented before the fortieth annual meeting of the North Dakota State Medical Association at Grand Forks, N. D., June 1, 1927, and the Aberdeen, S. D., District Medical Society, Mobridge, S. D., September 3, 1927.

Thyroxin is concerned with the first split of ammonia from the amino acids. Adrenalin converts this substance into some other product, while the thymus, parathyroids, and other ductless glands are probably operative in the further elaboration of the nitrogen constituents which eventually are found in the urine. So it will be seen that the thyroid hormone only begins the increased rate of production of ammonia. This does not in itself produce hyperthyroidism, which results when other ductless glands become stimulated causing marked changes in metabolism. Crotti called attention to the relationship between the thyroid, pancreas, and the adrenals. The thyroid and the adrenals stimulate each other, the thyroid and pancreas inhibit each other, and the pancreas and adrenals are antagonistic.

In the normal thyroid gland the iodine is stored in the colloid substance as an incomplete product to be used by the gland in the production of the thyroid hormone. In the event of a deficiency of iodine supply, this accumulation of colloid is enhanced, resulting in enlargement of the gland, simple colloid goiter.

Simple goiter is endemic only in the northwestern and north central districts of the United States. In the north central district iodine insufficiency in the soil and water is the active agent, while in the northwest iodine is unavailable because of its occurrence as stable chemical compounds. It was McClendon and Williams who first pointed out that simple goiter existed in inverse ratio to the available iodine content in soil and water. Other causative factors are indicated by the fact that simple goiter is seven times more frequent in girls than in boys. This is explained by the greater demands of the tissues in puberty, pregnancy, during lactation, and the menopause. Strenuous gymnastic exercises by young girls cause a heavy demand on the thyroid during adolescence.

Inasmuch as the thyroid gland deposits colloid to meet the demands of the tissues, the administration of iodine in sufficient quantities relieves the excessive demands on the gland, allows the completion of the product and the gland ceases piling up colloid.

Infections of the teeth, tonsils, and intestinal tract also affect the demands of the tissues for thyroxin. Marine and Lenhart showed the relation of infection to goiter in fish. The incidence of adenomatous or nodular goiter parallels colloid. The development of adenoma occurs in colloid goiters of long standing and, according to Plummer, is a compensatory attempt of the gland to meet the increased demands for thyroxin. While the majority of adenomata develop late, they may occur early and at the age of forty-five 50 per cent become toxic. During pregnancy and the menopause, the liability of the development of toxicity is much increased. While adenomata may not be influenced by the administration of iodine in small doses over a short period of time, the ingestion of large doses or the continued administration of small doses over a relatively long period of time is almost certain to produce toxic symptoms. Plummer believes that the adenoma hyperfunctions when it becomes toxic and that the increased rate of the exhaustion of thyroxin and the resulting elevation in intensity of stimulation of the thyroid are the immediate causes of hyperthyroidism.

Adenomata rarely develop hyperthyroidism before twenty years of age unless stimulated by iodine, and may be present for eighteen to twenty-five years before showing toxic symptoms. Seventy-five per cent of the development of toxic symptoms occur over the age of forty.

The onset of the symptoms is gradual and they are present on an average of four years before coming to treatment, with resulting damage to the vascular system.

There is first noted increased nervousness and irritability followed in succession by palpitation and tachycardia, tremors, and moist warm skin. The loss in weight is only slight in the early stages and muscular weakness develops very gradually. Later as the vascular degeneration proceeds, cardiovascular symptoms are more pronounced and dyspnea and anasarca supervene. The blood pressure shows a high systolic pressure with a high pulse pressure and a proportional rise in the diastolic pressure.

The metabolic rate is moderately increased and seldom reaches the high levels seen in exophthalmic goiter. The amount of iodine necessary to stimulate an adenoma to hyperfunction is extremely variable, and any administration of iodine in goiters where adenoma may be present should be carefully directed.

In sections of the country where iodized salt is freely used the increase in hyperthyroidism in adenomata has been marked. The increased number of toxic adenomata in Switzerland has been especially great, Klinger reporting an increase of 300 per cent since the introduction of iodized salt.

The actual inciting cause of exophthalmic goiter is not known. It occurs in women five times more frequently than in men, is often precipitated by great emotional disturbances, and often is acute in onset. That it is not a disease in which the thyroid alone is concerned, is now accepted, but is a pluriglandular disturbance in which the thyroid is stimulated to great overactivity to supply an excessive demand by the body for thyroxin. The typical hyperplasia which characterizes the pathologic picture of exophthalmic goiter points to the fact that the thyroid endeavors to produce thyroxin in excess. The reduction of colloid material and marked increase in cellular elements would indicate such a conclusion, the degree of toxemia being always in direct ratio to the amount of hyperplasia found in the gland. Studies of exophthalmic goiters in which iodine had been administered show distinct reversion to simpler forms. This involution tends to take the form of the simple colloid type.

We have observed in cases of typical clinical hyperplastic goiter in which iodine had been administered in periods of one to two weeks preceding operation, that there was marked decrease in the hyperplasia with increase in size of the acini, and increased amount of colloid. These glands resembled very much the simple colloid types and even normal thyroid tissue. In the same glands were found areas of adenomatous tissue. At first we were inclined to the belief that the thyroid hyperplasia was superimposed upon an adenomatous or colloid goiter, but our investigations have inclined us to believe with Reinhoff of Baltimore who has shown in the past two years that these reversions to type were the result of an involution taking place from the use of iodine. He showed in 1926 in a series of seven cases in which he made biopsies of typical hyperplastic goiters before the administration of iodine was begun, being careful not to disturb the circulation of the gland, that these involutional changes occurred throughout the gland after administering iodine from one to two weeks. The degree of involution varied in different parts of the gland, the most common change due to a lesser degree of involution produced the picture of simple colloid goiter, while greater degrees of involution, or as he calls it hyperinvolution, produced the picture of adenoma which is indistinguishable from a true neoplastic adenoma. It is justifiable to deduce from these facts that similar changes occur in the gland as the result of the physiologic remissions which are common to this disease, and it is reasonable to assume that many nodular goiters develop in this way. This explains the confusion which has been so often in evidence in differentiating the various types of hyperthyroidism. It further indicates that hyperplasia recurs in these thyroids when some sudden demand for thyroxin has occurred. By supplying the necessary iodine to meet this demand, the hyperplasia, at least temporarily, subsides, and the histological picture reverts to the original type.

The early case of exophthalmic goiter is frequently not recognized, its confusion with heart lesions, gastro-intestinal disease, nervous diseases, such as hysteria, dementia, and functional neuroses, is frequent. It occurs more frequently in the young, twenty-six being the average age (18 to 35).

The onset is often acute, frequently follows emotional disturbances, and pursues a course characterized by waves of progression, in which at about three-month intervals the crises may occur. The crises of exophthalmic goiter are accompanied by diarrhea and emesis and often end in remissions. Twenty per cent of exophthalmic goiters end in spontaneous cures, but with great damage to the cardio-vascular system and the kidneys, and chronic invalidism is the result.

SYMPTOMATOLOGY

Tachycardia is often the first symptom, the pulse rate being 90 to 180. The temperament may be changed quickly, the patient changing from a placid personality to one of irritability. A markedly increased activity of the patient is early manifested. Psychoses may ensue.

The constant fine tremor develops early, beginning in the hands and arms and may involve the whole body. The skin, which is moist and warm, shows a marked reaction to warmth, and exophthalmic patients are more comfortable in a cool atmosphere.

Insomnia develops early and frequently becomes one of the most distressing symptoms. Muscular weakness is marked and is early shown in the ease with which fatigue develops. The loss in weight is a constant symptom and is variable, depending upon the degree of toxemia, and when it is rapid indicates a poor operative risk and an approaching crisis. Except during crises, the appetite is usually good. These cases require 4,500 calories daily. As the disease progresses the appetite fails and food brings on nausea, thus forming one of the greatest problems in treating these cases.

Exophthalmus occurs in only 50 per cent of the cases in the first three months and may at first only be noticeable as a staring expression. The exophthalmus persists in about 25 per cent of the cases after operation. The absence of goiter in these cases often causes errors in diagnosis. Goiter varies and often is not large. In many cases inspection does not reveal thyroid enlargement which can be demonstrated by palpation. Vomiting and diarrhea usually occur during the crises of exophthalmic goiter and early in the course occasional attacks of diarrhea with spontaneous improvement lead to the gastro-intestinal mistakes in diagnosis. The blood pressure is characteristic. The systolic pressure is usually high with a high pulse pressure, but there is a marked fall in diastolic pressure. This fall in the diastolic pressure is greater in proportion to the severity of the toxemia, and with the pulse rate and metabolic rate is an excellent index to the resistance of the patient. The metabolic rate rises concomitantly with the pulse rate and varies from a moderate increase to +30 in the mild case to +90 or above in severe hyperthyroidism. It is an excellent indicator of the degree of toxemia falling as the toxemia decreases, but should not be used alone as a criterion as to the patient's resistance. The best information as to when the patient is ready for operation is obtained from the clinical appearance in conjunction with the diastolic pressure, pulse rate, and metabolic rate.

The use of iodine in the treatment of goiter is of ancient origin, the Greeks having employed the ashes of burned sea sponges without knowing of the presence of iodine. In 1820 Coindet succeeded in treating large thyroids with iodine, and in 1856 Chatin made the observation that goiter incidence occurred in the regions of glaciers where the iodine content of the soil and water was low. In 1896 Bauman made his discovery of the iodine content of the thyroid gland, and in 1907 Marine and Kimball carried on their epoch-making experiments in the schools of Akron and established the efficacy of iodine in the prevention of goiter. Marine has pointed out that the normal thyroid contains from 1 to 5.5 mgm. per gram of the dried gland, and that when the iodine store of the thyroid was 0.1 per cent or over, no pathology developed, but when the iodine content fell below 0.1 per cent, hypertrophic and hyperplastic changes were regularly found, and that as the hyperplasia increased the iodine content decreased, so that in the most marked hyperplasias iodine was absent or present only in traces.

Iodine has no effect on the normal thyroid, but in colloid goiter the administration of iodine causes the gland to cease storing up the colloid, allows the completion of the incomplete product and thereby reduces the enlargement. Iodine in any form will accomplish this result. The requirement to a prophylactic measure is 10 mgm. of iodine weekly or 1 mgm. daily. This dosage is sufficient to maintain a content of 25 grams in the body. This may be obtained by giving 1 cc. of syrup of hydriodic acid or syrup of ferrous iodide daily for two or three weeks twice yearly, or 2 grams of sodium iodide in 0.2 gram doses over a period of two weeks repeated twice yearly, or the method now most approved of giving a chocolate-coated tablet containing 10 mgm. of iodine at weekly intervals. This method of prevention is best applied in the schools, but has its disadvantages inasmuch as it does not reach the child of pre-school age, nor the women in pregnancy and the menopause, critical periods when goiter may develop. In order to reach all the susceptibles in the population, some other method more general in application is necessary. The treatment of water supplies is not recommended because of the expense attached to the method brought about by the immense waste when it is considered that only a small part of the water is used for drinking purposes. The use of iodized salt fills the need for this general application. That harm can come from the indiscriminate and unregulated use of iodized salt, especially in adenoma, has been demonstrated, but the concensus of opinion is that too high concentration of iodides has been used.

The Committee of the Pediatric Section, Michigan State Medical Society, recommend a salt containing 0.01 per cent of sodium iodide. This will yield .0453 grams of sodium iodide per pound, and, if the consumption is 8 pounds per year per person, will furnish 7 mgm. per week, which is less than the maximum known to be harmless. In a late address Marine recommends the general use of such a salt as a prophylactic measure in prevention of goiter, declaring that the great amount of good accomplished will far outweigh the harm it may cause in a few selected cases of adenoma.

In the treatment of goiter larger doses are necessary. It requires 100 times less iodine for prevention than for treatment. Thyroid extract is more effective than iodine in treatment, and it is recommended to use a combination of thyroid extract and iodine, but the subject should be under careful supervision during the administration of thyroid extract. One to 2 gm. of thyroid gland should be given daily for two weeks. If no hyperthyroidism develops, repeat the procedure and follow this with two weeks treatment with iodine. One cc. of syrup ferrous iodide or syrup of hydriodic acid daily for two weeks repeated three times yearly is sufficient. One must be careful in avoiding large doses of iodine because large doses distend the alveoli and cause enlargement of the gland. In this conncetion it is well to note that 1 cc. of Lugol's solution contains 125 mgms. of iodine or five times more than is necessary to administer in the course of an entire year for the prevention of goiter.

The rôle of iodine in adenoma is important because its use over prolonged periods or in large dosage is fraught with the danger of inducing hyperthyroidism. It is best not to give iodine as a therapeutic or prophylactic measure in subjects over twenty years of age except during pregnancy, the period of lactation, or the menopause, because it has little effect in reducing colloid goiter after this age and is very likely to stimulate adenomata to hyperfunction. There is no danger in using iodine for short periods in adenomata before operation.

In 1863 Trousseau prescribed tincture of iodine for a case of exophthalmic goiter when he intended prescribing digitalis and noted marked improvement, but he failed to follow his advantage and continued his warning against the use of iodine in this type of hyperthyroidism. Several observers reported good results with iodine therapy in exophthalmic goiter. Kessel, Hyman, and Lande reported marked clinical improvement in cases where rest seemed the important factor, but these cases had received Syrup Ferrous Iodide as a tonic. It was in 1914 that Plummer reported 200 cases in which he established the efficacy of iodine in treating exophthalmic goiter. His conclusive results immediately were accepted by the profession and the use of iodine in exophthalmic goiter became routine procedure in preparing patients for operation. The value of iodine treatment lies in the marked improvement shown in these cases. The distressing symptoms become quickly improved and a desperate operative risk becomes comparatively safe. The cases with crises are saved from death and it is only in a small group that iodine fails to relieve the symptoms. The length of time necessary to bring about this improvement is variable, depending upon the degree of toxemia and the dosage of iodine. In the severe cases with crises 3 to 6 cc. (50 to 100 m.) Lugol's solution should be given during the first day or two and then 0.6 cc. (10 m.) three times daily. In the less severe cases (10 m.) 0.6 cc. are given well diluted in water or grape juice three times daily for seven to eighteen days before operation, doubling the dose the day before and the day of the operation, and the day after the operation. In addition to the administration of iodine these patients often require other supportive measures. The inanition and dehydration are best treated by subcutaneous infusions of saline solution and intravenous administration of glucose solution. Ice caps are applied to the heart and thyroid gland and sedatives are necessary to control the restlessness. Luminol and the bromides usually suffice but it may be necessary to resort to morphine in the more severe types.

The dosage of iodine should be regulated by the severity of the toxemia and the length of time preceding operation. If the period of preparation is long, over two weeks, small doses should be used, and large doses if the period of administration is short.

In the administration of iodine in hyperthyroidism it must be remembered that prolonged use of iodine stimulates the gland to hyperfunction, and recurrence of hyperthyroidism results. Starr has shown that the effect of iodine tends to follow a typical course. There is first a remission of the symptoms which occurs in the average case in ten to fifteen days. If iodine administration is continued this period of remission is followed by a gradual return and aggravation of the hyperthyroidism which occupies one to three months' time. Upon discontinuance of the iodine a post-iodine reaction occurs in which the metabolic rate rises higher than before and all symptoms are exaggerated. This reaction lasts from three to six weeks when the rate falls to approximately the same original level before iodine administration was begun. Starr shows that this same reaction occurs in adenoma with hyperthyroidism as well as in exophthalmic goiter. It is evident, therefore, that iodine administration in hyperthyroidism should be confined to the immediate pre-operative period.

If the period of hyperthyroidism is prolonged, marked damage to the cardiovascular system occurs. Hypertension is of frequent occurrence and myocardial degeneration often accompanies. While auricular flutter and premature contraction occur, the most common arrythmia is auricular fibrillation, and digitalis is necessary in these cases. Digitalis has no effect on the tachycardia. Many cases of marked fibrillation react favorably to iodine therapy, but the use of digitalis is preëminently valuable in overcoming the decompensation resulting from the fibrillation. Realizing the susceptibility of the myocardium in hyperthyroidism, we use digitalis routinely in the preparation of all cases for operation whether fibrillation is present or not. Care must be exercised not to give too much digitalis because in cases where digitalization is carried to excess, postoperative cerebral edema may take place.

Cases of hyperthyroidism which are complicated by foci of infection are sometimes wrongly handled. The hyperthyroidism should be considered and handled first, and attention to tonsils and infected sinuses, et cetera, delayed until the acute hyperthyroidism is treated.

CONCLUSIONS

As a prophylaxis iodine is best administered by giving a chocolate-coated tablet containing 10 mgm. of iodine once weekly. To reach the whole population iodized salt, containing not more than .01 per cent sodium iodide, is recommended.

In the treatment of simple goiter, thyroid extract in conjunction with iodine gives the best results, but the treatment should be carefully supervised. Extremely large doses of iodine should be avoided.

Hyperthyroidism should be under medical management before and after operation. The prolonged use of iodine in hyperthyroidism causes recurrence of toxic symptoms after the period of remission, and the use of iodine in this condition is indicated only in the immediate preoperative period.

There is a very close relationship between the hyperthyroidism of adenoma and exophthalmic goiter and iodine exerts similar effects in both.

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MALARIA IN THE TREATMENT OF GENERAL PARESIS*

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The treatment of neurosyphilis by fever-producing methods, notably by the genesis of malaria in the patient, cannot be longer classed as a novelty.

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From the review of the literature uniformly encouraging results are reported from Continental Europe and this country in the treatment of general paralysis by the inoculation of the patient with tertian malaria.

The value of fever therapy originated from quite old observations. Cases of mentally diseased patients improved following intercurrent infectious diseases accompanied by high fever. During the past century numerous reports are to be found in the literature of psychosis favorably influenced by typhoid, typhus, cholera, measles, and suppurative diseases. Since the advent of malarial treatment certain interesting observations concerning the effect of acute disease in modifying a chronic disease, have been collected. In ancient times it was the custom of Peruvian natives suffering from uta, a skin disease resembling lupus, to repair to certain localities where malaria was endemic, the tradition being that, after a number of attacks of malaria, the lesions of uta cicatrize and are cured. Bercovitz states that in countries where syphilis is very common, and where malaria is practically universal, as in Indo-China, symptoms of neurosyphilis are rarely observed.

The treatment of general paralysis by the inoculation of malarial blood was first introduced by Professor Wagner von Jauregg, chief of the psychiatric clinic, in Vienna, in 1917. However, as early as 1887, he laid the real basis for the evolution of fever therapy, in his paper on "The Influence of Febrile Disease on Psychoses".[1] In this article he stated that Hippocrates was acquainted with the art of healing of mental disorders by febrile disease, and that Galen cited a cure of melancholia by intermittent fever. He considered at that time the use of erysipelas, malaria, and recurrent fever and advocated malaria because it was the most easily controlled. Numerous difficulties at that time prevented him from using such a radical procedure.

With the idea of getting beneficial results from the induction of fever, Wagner von Jauregg[2] and his pupils treated many series of psychosis and general paralysis by the use of Koch's old tuberculin and always observed that these cases showed much higher percentage of remissions. After the syphilitic nature of general paralysis was established he combined mercury and the iodides with the tuberculin treatment. Later he used typhoid vaccine with favorable results, then staphylococcus and streptococcus vaccines were used by him, but the work was given up because the remissions were of short duration.

Wagner[3] felt that a true febrile disease would produce better results, so he turned back to his original proposal, and in the summer of 1917 he inoculated nine patients having general paralysis, with malaria. Six were definitely benefited, and when three of these were actively at work, in 1922, he subsequently inoculated about 200 patients, with the result that over 50 improved to a complete remission. The work was carried on in Vienna by Gerstmann,[4] who gave us a detailed report on 294 cases in 1923. Out of these 294 patients 112 had a complete, 90 an incomplete, and 92 no remission.

Reese & Peter,[5] of Nonne's Clinic in Hamburg, treated 270 paretics. They analyzed 75 of their cases after a long period of time had elapsed. Their results were 50 per cent complete remissions, 20 per cent decided improvements and 29 per cent without improvement. There are quite a number of smaller groups which have been analyzed by various research workers. The great majority of them present good results and recommend highly the malaria treatment of most forms of neurosyphilis.

Bunker and Kirby,[6] in February, 1925, were the first in this country to report their results in 39 cases treated by inoculation. Eighteen of their patients were markedly improved, and 14 returned to their former occupations.

O'Leary,[7] and associates at the Mayo Clinic, in March, 1926, reported their observations in 24 cases; 28 per cent showed a complete remission that allowed them to return to their former occupation within two months after the malaria was stopped. In a later report,[8] the same authors state, by way of summary, that the continued observations on 35 patients, treated by the fever therapy and followed for a period of two years, has convinced them of the value of the method in the treatment of parenchymatous neurosyphilis. None of the patients who were improved have shown any evidence of relapse.

To review further the statistical data from the literature would be beyond the scope of this paper. All reports seem to harmonize in a general way, and that malarial therapy offers more immediate effects than any treatment used heretofore. While the results in many instances impress one with the favorable reports, they caution not to make conclusive estimates of the value of this form of treatment until a number of years have elapsed from the time of inoculation.

It is also essential not to expect the unattainable. Certain portions of the nervous system that have undergone degeneration will not be restored or rejuvenated. Also the problem under consideration is complicated by the fact that spontaneous remissions of principal symptoms in general paralysis are known to occur, so that some improvement may be expected under all forms of treatment.

There are numerous disadvantages or limitations to the malaria method as a therapeutic measure. Foremost is the fact that the disease must be transmitted from patient to patient, as it is not practical to keep the living organism either in culture or in laboratory animals. As a consequence such treatment in many communities is not available. Furthermore the treatment may be somewhat heroic for malaria, as it causes severe reactions and leads to a certain mortality.

Nonne[9] cautions the practitioner as follows: A paretic inoculated with malaria is to be looked upon as a patient seriously ill, and is to be treated only in a hospital or clinic where experienced physicians are at hand. Only pure tertian malaria should be used, and it should have made a number of passages. The blood should be controlled every day, so that the treatment may be discontinued if there is an overflow of malaria in the blood. Patients should be dismissed only after they have been free from the parasites for a period of three weeks.

There is also the possibility of infecting an innocent host. According to Deaderick and Thompson, [10] there are forty-four different types of anophelinæ that are malaria transmitters, and there are very few, if any, communities in which one or more members of the anophelinæ are not found some time during the year. In view of this fact the ordinary vigilance of screened windows, isolation, and precaution should be carried out.

There is no established principle by which the improvement in general paralysis can be explained. It is based purely on practical experience and observations. There have been several hypotheses suggested for the action of malaria. Plaut[11] proposes the idea of an immunity reaction; that is, that the host infected with malaria produces antibodies, or other substances, which act against the spirocheta pallida. Another theory is that the body temperature is the factor chiefly responsible for the favorable effects of the intercurrent infection. The experimental work on the thermal death point of the spirocheta pallida, by Schamberg,[12] is of interest in this connection, as they found that this organism is biologically damaged or destroyed at a temperature far lower than necessary to devitalize vegetable microörganisms.

O'Leary,[7] in his review of cases treated, states that the patients who had an average temperature of 105°F throughout the chills showed the most marked clinical remissions. Purves-Stewart[13] express the opinion that malaria accomplishes the good results by the pyrexia, as it burns up the toxins affecting the cerebral cell.

Statements in the literature of the histological findings in brains of paretics inoculated with malaria are still scarce. The largest number of them has been dissected in von Jauregg's[14] clinic; 35 brains were analyzed in order to determine if there is any parallelism between the clinical remissions and the brain pathology. They came to the conclusion that the degree of the pathological process in the brain is in keeping with the clinical improvement. Freeman,[15] in April, 1927, reports his histopathological observations in his study of fifteen paretic brains. He states that, except for some reduction in the number of neurons in the cerebral cortex and marginal fibrillar gliosis, the anatomic picture practically does not deviate from the normal, and the brain is evidently in satisfactory working condition, to judge from the histologic appearances. He prophesied that eventually the term "recovery" will come to be used for certain cases instead of remission.

My own series of cases treated since November, 1925, comprise 28 general paralytics treated by malaria inoculation. Two are undergoing treatment at the present time, hence cannot be considered. Of the twenty-six, five apparently have undergone a complete remission, five moderate improvement, seven show slight improvement, eight have not improved mentally, and two have died.

All patients were inoculated by the intravenous injection of 6 c.c. of blood taken from patients already under treatment. The incubation period was from five to seven days, the longest being seventeen days. The maximum temperature was 107.5°F., the average being about 105°F. All patients were allowed to have at least twelve chills, and if the general condition warranted fifteen chills. Quinine sulphate, five grains, t.i.d., was given for eight days, then five grains twice daily for one week. The malaria was exceptionally easy to control, and in no instance was there a recurrence of the chills. Blood smears were made daily for one week following the last dose of quinine before the patient was allowed to leave the hospital.

The complications present were those comparable with most observers, namely, a marked secondary anemia and a rapid loss of weight. In a number of cases nausea and vomiting was a troublesome symptom, and in a few instances a mild icterus developed. An acute active delirium developed in an occasional patient, but subsided after the quinine was given.

The results of the inoculation manifested themselves usually from six to eight weeks. The anemia cleared up rapidly, as well as a return to the normal weight, and in many instances a marked increase over their previous weight. The serological changes were most prominent in the spinal fluid, the cell count being reduced, frequently returning to normal, also, a reduction in the globulin content. The blood Wassermann was least affected and continued to remain positive in most of the patients treated, as well as the spinal fluid Wassermann.

Of the eight patients not improved, all were rather far advanced in the disease, and considerable mental degradation had taken place before the malarial treatment was given, but a noticeable gain in weight was apparent, they were more tidy in their habits, more quiet and there was an absence of convulsive seizures so common in advanced paretics.

In the seven who showed slight improvement, the change was appreciated in the mental condition, less irritability, some insight, improvement in conduct, no change in their physical condition other than a gain in weight.

The two deaths that occurred were both aggravated types of paresis. One died three weeks following inoculation, from exhaustion, the other, four weeks later, following general convulsions.

The five moderately improved were able to leave the hospital six to eight weeks after treatment and are able to be occupied, but still show considerable degree of mental impairment. The speech defect improved, no amnesia or disorientation being present. Tremors were less prominent, but no change was noted in the reflexes, spinal fluid and blood Wassermann still positive.

The five apparently definitely improved all had complete remissions and returned to their former occupations in five to six weeks after treatment. The serology of their blood and spinal fluid improved, as well as the physical findings. One patient had the classical expansive type of paresis noticeable for three months previous to treatment, with characteristic neurological findings, eye changes, pathological reflexes, and positive serology of blood and spinal fluid. Six weeks following treatment all his symptoms had disappeared, as well as eye and reflex changes, and on repeated examination both his spinal and blood findings were negative.

All patients inoculated had previously received intensive antisyphilitic treatment, including intraspinal methods, with apparently no benefit. Also, in many instances, considerable time had elasped since the onset of their paresis, and not a great deal of response could be expected. In those cases that did not show any particular, marked clinical improvement, other than gain in weight, their condition has so far remained practically unchanged.

Fully one-third of the patients that I have treated did very well and responded clinically, but as most observers report there was no correspondence between the clinical and serological findings. The patients treated early in the course of their disease showed the most trend to normalcy in the laboratory findings. Of the group treated that have been under my observation there has been an absence of any change in the remission.

A much-discussed question is whether the malaria treatment should be given in connection with other specific therapy. Nonne has tried all methods and has found no noticeable change in any of them. He has seen the same good results in malaria in which no other form of treatment followed. I have continued antisyphilitic treatment, with tryparsamide, to those patients having a favorable remission, in the hopes of changing the serology, and in a few instances I feel that results have followed, especially in the spinal fluid.

I feel that we should be alert to recognize paresis early in the course of the disease. The criteria for true paresis are: speech disorders, pupillary changes, reflex changes, amnesia, quick shifting emotions, character changes, and conduct slump. Any syphilitic showing positive spinal changes, who does not react to the ordinary methods of treatment, should receive the malarial therapy.

After two years observation on the use of malaria, and a study of the literature, I feel that the results obtained far surpass any other form of treatment and are sufficient to warrant the assertion that malaria therapy deserves an important place in the treatment of neurosyphilis.

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WHAT IS THE VALUE OF A BIRTH CERTIFICATE?

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I know of no other subject on which ignorance is so gross and so unteachable as this subject of vital statistics.—From "Lay Thoughts of a Dean" by William Ralph Inge.

A similar thought has often occupied the mind of the one who has directed the work and building-up of the structure known as the Division of Vital Statistics of the State Department of Health of Minnesota.

The Vital Statistics Law, requiring the registrations of births and deaths occurring in Minnesota, has been in effect since 1887, and has provided that the medical attendant shall report births within ten days. Not until twenty years ago, however, was a systematic effort begun to educate physicians in the matter of promptly reporting all births occurring in their practice. Since 1908 steady and persistent pressure has been brought to bear upon the medical profession throughout the state to comply with the law in this respect. It was quite apparent that there were many physicians who had paid but scant attention to their duties in the matter of filing reports, and the results of this carelessness are now very apparent. The Division of Vital Statistics is daily being put to a great deal of additional work and correspondence in order to straighten out for interested parties the trouble and inconvenience resulting from the non-recording of their births.

Birth records filed at the present time for cases which occurred more than a year or two ago are not accepted unless accompanied by a properly executed affidavit. An affidavit proves rather an appalling document to certain individuals who are called upon to produce certified copies of their birth records, and it is exceedingly difficult to make them understand what is required. Furthermore, expense is often involved. More or less traveling about must sometimes be done to obtain the required facts; the affidavit must be sworn to before a notary public, etc. This expense does not always prove a small item to persons of meager means. In a large percentage of cases all this trouble, expense, and time involved in straightening out matters would have been avoided had the medical attendant complied with the law by reporting the birth at the time it occurred.

In 1922 the Board's finances first permitted the employment of a Vital Statistics Field Agent, who checks up unreported births and deaths throughout the state and files complaints against offenders. This has resulted in many physicians being compelled to pay fines, and it may be added that they are usually paid without much remonstrance. In no case has a complaint been filed unless the attention of the physician concerned has previously been drawn to the law's requirements through correspondence on the part of this Division.

The demands for certified copies of birth records are constantly and greatly on the increase, and many physicians are to-day realizing for the first time that a birth certificate is something more than a mere slip of paper. The fact that such a record is a legal document has apparently been lost sight of. Certified copies of these records are needed for many purposes, chief among them the following:

1. As evidence to establish age, proof of citizenship, and descent in order to vote.
2. As evidence in the enforcement of laws relating to education and child labor.
3. As proof of citizenship in order to obtain a passport.
4. As evidence to establish the right of admission to the professions and to many public offices.
5. As evidence in the administration of estates,

the settlement of insurance, and pensions.

6. As evidence in the claim for exemption from or the right to jury and militia service.

To fail to properly record the birth of a child is to do that child a grave injustice.

When a systematic checking up of delinquent physicians was first begun, they frequently asked, "Why all this fuss about a birth certificate? We have never been annoyed in this way before."

It is exceedingly difficult to comprehend how men of intelligence—and physicians must certainly be so classified—can assume this careless attitude toward the filing of these important records, which have so great and frequently so grave a bearing on the interests and welfare of humanity. Each and every day physicians throughout the state are being called upon to assist in recording births which they attended many years ago and failed to report at the time. A great many certified copies of birth records are needed in the adjustment of compensation claims for ex-service men. Without proof of birth of the child no compensation can be allowed. A large number of certified copies are required in the issuance of passports. Since the restricted immigration laws went into effect, Mr. F. R. Barclay, Inspector in Charge, Post Office Department, Washington, D. C., has returned to this Division many certified copies which we have issued, requesting that they be properly verified. As the greatest of care is taken to see to it that the certified copy agrees with the original record in every particular, Mr. Barclay was asked for an explanation. The medical profession may be interested in the following excerpt from his letter:

> As a result of the recent legislation whereby there is now restricted immigration to the U. S., American passports are eagerly sought after for the purpose of entering this country. Before such passports are issued, naturally, the applicant has to give evidence of American birth and must submit a birth certificate, a baptismal certificate, or in default of either, affidavits from reliable people who can testify as to the applicant's birth in the United States.
>
> There has been such a demand for entrance into the U. S. by aliens that an American birth certificate has now become a valuable piece of property, particularly in the hands of an alien. These certificates may be correctly transcribed from the State records and duly certified under the seal of the issuing officer but may have been altered in various particulars to suit the needs of the alien who intends to present same as evidence of his alleged American birth. The names may be changed, the date of birth and the names of the parents, and all this without disturbing the notary seal or the signature of the officer issuing the certificate. Accordingly, when birth certificates are submitted by the Postmaster to the State Registrars for verification all that is asked is that the certificate as presented by the Postmaster be examined by the State Registrar to see that it conforms in every particular to its condition when originally issued. A verbal verification from the State Registrar is all that is necessary if he says there has been no alteration or changes in same. When the certificate is handed back to the Postmaster with that assurance, then the Department of State accepts same as ample evidence of such a birth having taken place.
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> However, in the matter of what are called "delayed certificates" the Department of State, upon ascertaining the date on which the record was originally filed, finds it necessary to interview the parties making the affidavits upon which the birth record was recorded. If it is found that the birth record was created upon evidence obtained from the chronological records kept by a reputable physician, then the birth certificate is given due weight and consideration.
>
> On the other hand, if it has been found that the physician or midwife has no records whatever, but when necessity of some birth record being furnished has been put up to them by the relatives of the party desiring admission into this country, and they have accepted the alleged facts as to the birth from the relatives and reported same to the State Registrar accordingly, such birth certificates are not given much consideration by the Department of State.

The citation of a few instances only will illustrate the distress, inconvenience, and annoyance caused by failure to file these important records.

At the beginning of the World War an American in England at the time offered to serve in the English Air Service. He was advised that his services were not required. He offered at various times to serve in other branches of the English Army where a knowledge of skilled mechanics was required. Each time his offer was rejected. Later as conditions demanded every available man, an attempt was made to draft him into the ranks. He then rebelled and to his chagrin discovered that he could not prove that he was an American citizen. His birth had occurred in Minnesota, and he wrote the State Office. Several weeks of correspondence on the part of the Division of Vital Statistics with relatives and others in the States having the facts, resulted in having filed for him a record which established his citizenship.

After the United States entered the War, the Draft Board figured largely in our correspondence, and many were the visits paid the office by mothers of young boys and the boys themselves to establish proof of the age of the latter. One day found two mothers in the office, both in tears, because their sons were under arrest as slackers in Duluth. Neither boy was eighteen years old, but their growth indicated otherwise, and the Draft Board refused to accept their statements that they were under the minimum age. The mothers had been advised to apply to the State Board of Health for assistance. Fortunately, the records of both these young men were on file and established that neither was eighteen years of age. The Draft Board at Duluth was immediately notified, and the boys were released.

An Italian came to Minnesota some years ago, and several children were born in his family. Later the father returned to Italy for a visit, taking the family with him. When it came time to return to the United States he encountered considerable trouble in gaining admission for the children for the reason that their births had not been recorded when they occurred in the States. Through much correspondence on the part of the State Office with relatives of the father, church authorities, and others, sufficient evidence was secured to permit the filing of birth records of the children. Copies were immediately sent the immigration authorities, and the entire family re-entered the States.

Another instance is that of two young men recently married at the time the case was submitted to us, who had been arrested on a charge of carnal knowledge. The girl stoutly affirmed that she was not eighteen years of age (the age of consent) at the time the offense was committed. Interested individuals appeared at the State Office to obtain the date of her birth, and it was found that no record was on file. It was not known definitely in what district in Minnesota her birth occurred, and the authorities working on the case visited various districts. Finally, after much time and effort had been spent, a record was found among discarded papers in the possession of a careless registrar, papers evidently considered by him of no value. The record proved that the girl was eighteen years of age at the time of her relations with the men referred to, and the "slip of paper" was the only thing which saved the men from serving time in the State penitentiary.

A certain physician of excellent standing in his profession was apt to be very remiss in the matter of reporting births occurring in his practice, even though his attention had repeatedly been drawn to the requirements of the law and the importance of such records. Recently he made plans to spend some time in Europe. He was instructed to produce a copy of the record of his birth, and he found to his annoyance that his birth had never been properly recorded. He wrote the State Office asking for assistance in straightening out matters. Fortunately, there were relatives who had the facts, and the medical attendant was still living. A properly executed birth certificate and affidavit were filed. It is a pleasure to add that this physician no longer gives the Division of Vital Statistics any trouble as regards the reporting of births that he attends.

These four instances are but a few, a very few, of the many cases laid before us. But they should be enough to convince any intelligent man or woman what these records mean as legal documents.

It has been the practice of this Division during the past twenty years to keep a record of every physician to whom it has been necessary to write calling his attention to the law's requirements. Such letters are *personal* letters, not mere formal notices, in which we endeavor always to be courteous.

The date of each such letter appears in the files. It is a grave reflection on certain of these professional men to state that from ten to fifteen letters have been written them courteously requesting them to comply with the law, and that these same men still continue delinquent in this respect. What right have such men to feel injured or to harbor a grievance when complaints are finally filed against them? It is, however, exceedingly gratifying to know that the group of physicians still careless about these matters is very small, indeed, compared with such group of twenty years ago. It is true that constant dripping wears away the hardest stone. Certain physicians who, in the beginning, took great exception to our letters urging them to report their cases promptly we number among the best friends this Division has. They now realize that our aim to have complete records is an unselfish and a very necessary one if we are to serve the people as they should be served and as they have a right to be served.

And yet, even to-day, many physicians add a great burden to the work of this Division because of carelessness in giving the data called for on these records. About 55,000 births are recorded in the State Office each year and from 12 to 15 per cent of these must be queried for completion and corrections. This proves costly and time-consuming work. It is not at all an uncommon thing for the physician to report the child as a boy. Later when a request is made for a copy of the record, or a supplemental report containing the child's given name is received, we learn that the child was a girl. Or the record may give the sex as female—and a girl grows up to find herself a man. As the original record constitutes a legal document, no change can be made on same without proper authority, and it becomes necessary in each such case to write the physician who has filed and subscribed the certificate. Nothing can be expunged from the face of any record. Corrections are required by law to be made in red ink on the face of the certificate, and all such corrections are required to be shown in a similar manner on the certified copy should it be needed.

Again, item 20 of the birth certificate refers to the number of children born to the mother. The item is worded as follows:

"Number of children of this mother
(Taken as of time of birth of child herein certified and including this child.)
(a) Born alive and now living ....
(b) Born alive but now dead..........
(c) Born dead..........."

Instead of filling in the required *figures* in these subdivisions it is not an uncommon thing for doctors to fill in the word "yes". This may at first thought occasion but a smile, but it is not a laughing matter for the Division of Vital Statistics, which must put forth every possible effort to correct defective returns. The humor of the situation is apt to wane with the lapse of time and continued carelessness.

Much additional work is brought about by the filing of certificates in the wrong district. There are in Minnesota 2,700 separate and distinct registration districts, each such district having its own local registrar. *The record must legally be filed in the district in which the mother was at time of confinement, regardless of her usual place of residence.* This requirement is constantly referred to in letters written to physicians. It is not an infrequent occurrence for physicians who have not taken the trouble to familiarize themselves with the law's requirements to send the certificates to the registrar of the district in which the mother lives. This means when the facts reach the State Office that these records must be transferred to the proper district and the registrars of the two districts concerned advised accordingly. A copy of the record must be sent to the registrar of the district in which the birth actually occurred and not until such copy is returned to the State Office, registered, numbered, and signed by the proper registrar is the original record placed on permanent file. Original certificates are never returned for correction or completion. Medical data are obtained on copies, which means much additional work.

Many physicians continue to make trouble for themselves, the local registrars, and the State Office by simply leaving a signed birth certificate with the family, depending upon them to complete it and file it with the registrar, or it may be left with the intention of having the given name inserted. This is not complying with the law, which provides that the medical attendant shall secure full particulars for the record, subscribe it and file it within ten days direct with the registrar of the district in which the mother was at time of confinement. Leaving signed blanks or partially filled out certificates with the parents will not relieve the physician of responsibility when complaints are filed. It is not an uncommon occurrence for parents to retain the certificate, put it away safely in the family Bible or with other family records. They do not realize that the certificate is a legal document and one which is required by law to be on file among the state records.

The original record should never be held up awaiting the child's given name. This is another point about which all physicians do not seem to be clear, and it is evident that they are not making proper use of the supplemental blank, which the law provides shall be filled out in those cases where the given name of the child is not known within the ten days allowed for filing the original certificate. Section 5356 of the law reads in part as follows:

"The attending physician or midwife shall deliver to the parents a blank for a supplemental report of the given name if the child is not named at the time of making the certificate of birth.

"When a certificate of birth is filed without the given or baptismal name the local registrar shall deliver to the parents a blank for a supplemental report of the name. Such supplemental report shall be made and filed with the local registrar as soon as the child is named. If such report is not filed within thirty days from the date of birth the local registrar shall obtain such name by other means."

Physicians are urged to leave a supplemental blank with the parents in each case where required. They should be instructed to fill it out as soon as the child's name has been decided upon and to file it with the local registrar direct. He in turn forwards it to the State Department after he has completed the local record.

Because of much misunderstanding on the part of physicians as regards proper procedure in reporting illegitimate births, the Division of Vital Statistics circularized the entire medical profession of the State in December of 1926 through a letter which clearly defined that the law *provides that no information as to the putative father of an illegitimate child shall be filled in on the birth certificate without his consent,* except when paternity is established by the court or by the subsequent marriage of the parents of the child *to each other.* It is discouraging to find that many physicians practicing obstetrics evidently did not give this letter proper attention, for we still continue to receive certificates of illegitimate children which contain full information as to the father. If the medical attendant knows that the mother is unmarried he should ask for no information relating to the father. It will readily be understood that many misstatements are made and deliberate untruths told by unmarried mothers and these lead to serious complications when the man whose name appears on the certificate denies the paternity of the child, and where certified copies of the certificates are required when court proceedings are resorted to. Under Chapter 17, General Statutes of Minnesota, 1923, the father of an illegitimate child is held responsible for its support up to the age of sixteen.

It is to be hoped that the foregoing long and possibly uninteresting explanation of the situation will make clear to the medical profession the reason for the persistent efforts of the State Department of Health to impress upon the physicians the importance of birth records as legal documents alone. Their importance for statistical purposes should be apparent to any medical man with little or no explanation. The records are interesting as to their actual number, and an excess of births over deaths constitutes the natural increment of population. From the number of births, we derive birth rates. Nothing reflects better the vitality of a community than its birth rate. The associated factors of legitimacy, nationality, and social position of parents throw light on the problem of racial fecundity and indicate from which sources our population is being derived.

Further, no phase of social hygiene has recently received more attention than the conservation of infant life. Without complete reporting of births no authentic figures can be compiled relating to infant mortality. Possibly the method of computing the infant death rate is not generally understood by the medical profession. Advice as to how to reduce infant mortality in any state is very concise, namely, *see to it that the birth of every child is properly recorded.* The explanation is brief: The infant death rate is obtained by dividing the number of deaths under one year of age, multiplied by 1,000, by the number of living births reported for the same period. The larger the divisor, the lower the quotient, of course. Why should any State be charged with a high infant death rate when such rate is due simply to the fact that birth reporting is incomplete?

Many of the foreign countries have excellent records of births and deaths. Sweden is said to have the best vital statistics and has registered its births for almost 200 years. It has the longest unbroken series of records. Birth, death, and marriage records have been kept in that country since 1741, and an annual census has been taken since 1749. The parish records of England date back to 1538. The first census in that country was taken in 1801.

In the United States the first vital statistics records were kept in the New England States. Census enumeration began almost with the begining of the Republic, but even to the present day birth and death registration in the United States is not complete. At the present time the Birth Registration Area includes forty-one states; the Death Registration Area, forty-three states. No state is admitted into these areas unless it has 90 per cent or more of its births and deaths recorded.

Minnesota to-day occupies an enviable position as regards its vital statistics. It has been a Death Registration Area since 1910 and was one of the ten states which comprised the *primary* Birth Registration Area, which was not established by the U. S. Census Bureau until 1915. At that time Minnesota was the only State west of Michigan which gained admission to the Birth Registration Area, a fact of which the state has reason to be proud. Our present position is due to persistent and much up-hill work on the part of the Division of Vital Statistics, and to the splendid co-operation of physicians, undertakers, registrars, and the general public.

The day should not be far distant when every birth and death occurring in Minnesota shall be a matter of record in the State Office. This can be accomplished through education and co-operation. In placing these important records on proper file we serve, not only the people of our own day, but those who will follow us. Let us, therefore, all work together for the good of all.

TUBERCULOSIS, ITS EPIDEMIOLOGY*

By Herbert A. Burns, M.D.
Member of the Medical Staff of the Lymanhurst School for Tuberculous Children
MINNEAPOLIS, MINNESOTA

It is an axiom in epidemiology that, knowing the source and route of an infection, the spread of the disease can be controlled. The identification of the host or carrier is of prime importance in disease control except possibly in a very few instances, where prevention can be accomplished through the use of vaccines. It is further an established fact in epidemiology that the susceptible contact infected, at once becomes a potential if not an actual source in the future spread of the disease.

The epidemiology of tuberculosis does not differ essentially from that of other communicable diseases. The one striking difference lies in the time element between the source exposing and the time when exposed susceptibles themselves become open cases or carriers. Infected contacts do not always or immediately become carriers themselves since the tubercle bacillus upon entering the body does not reproduce in the contact the pathological picture that is so characteristic of the host who is suffering from tuberculosis in the carrier stage of the disease. The relatively frequent occurrence of manifest pulmonary tuberculosis during early adult life has received no adequate explanation, although the prevention of this manifestation of the disease is the most important factor to be considered in its control. The primary tuberculosis infection occurs during the early years of life preceding adolescence. It shows a very definite tendency to become and remain latent, and in the great majority of the population it continues so during the remainder of the infected individual's life. How, then, can we adjust the individual to his environment to prevent breakdown? Two schools of thought have developed to explain the mechanism of infection responsible for the breakdown. One school champions the theory of the endogenous origin of infection. This theory is advocated by Krause, Hamburger, Fishburg, Selter, Long, Ritter, Turban, Gardner, and others, while the theory of exogenous superinfection has strong advocates in Hart, Opie, Sargent, Beumenberg, Roger, E. Albrecht, and many others. This problem has become controversial and largely so because it has been taken to the laboratory and the institution rather than to the epidemiologist for solution. While it remains primarily a problem, the solution of which we should agree upon since our methods of treatment must necessarily differ under present conditions, depending upon which of the two theories we are converted to.

The endogenous theory of infection, if accepted, would indicate that control measures in the future would emphasize the proper isolation of the open case from susceptible contacts. Little or no regard need be given to the exposure of individuals with latent lesions. The treatment of tuberculosis, if this theory is accepted, would be largely confined to the prevention of the carrier state of the disease by giving prophylactic treatment during the prodromal period (the period of childhood), putting emphasis upon the care of the pretuberculous rather than elaborating upon the treatment during the carrier state. Treatment for the disease during the carrier state centers upon the principle of rest. To provide adequate treatment facilities for this comparatively rare complication of the primary tuberculosis infection, it is necessary to build and maintain the modern sanatorium. The institution, if the endogenous theory of infection is accepted, is created for a single purpose, namely, to care for the carrier state of the disease. As an organization it has no interest in the individual who, becoming exposed, should be given prophylactic treatment. Neither is the sanatorium concerned in breakdown; these are epidemiological problems which, if handled at all, must be given attention in the home long before there is any need for sanatorium care. The sanatorium enters into the picture after the tragedy has occurred, and it leaves the picture in a few months following. The patient, except for the period of institutional care, remains an epidemiological problem during the remainder of his life time.

The endogenous origin theory considers that a large percentage of all children become tubercularized and will pass into maturity as potential carriers of the disease. They might continue in the prodromal period indefinitely by the aid of prophylactic treatment during and following exposure.

Just how far the influence of infant welfare and child hygiene activities in school and outside, as well as the popularization of personal health has gone in reducing our mortality statistics, is yet to be determined. It would seem that the general movement towards personal health has had a very definite influence favorable to the prolongation of the prodromal period in tuberculosis.

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*Presented before the Trudeau Medical Society, Minneapolis, Minn., February 28, 1927.

If the endogenous period of infection is correct we must admit that the acquiring of personal health habits in childhood and their maintenance through adult life have a very positive relationship to the postponement of the breakdown and the development of the carrier stage. It is not the manner of spreading the disease from a bacilli carrier, but rather the complicated train of circumstances that eventually transforms the infected individual into a carrier that challenges the efforts of the health official. The preventive measures are many, and most of them are obvious if the tuberculosis infection is considered a series of progression following the primary infection extending to the secondary stage during childhood and finally to the carrier stage during early adult life.

After the carrier stage has been reached, sanatorium treatment is provided. Why not set up the machinery to provide prophylactic treatment at home and so protect the latent case and his home against the carrier state and its sequelæ? To-day we do not cure tuberculosis, but rather train men, women, and children to live with tuberculosis or its residuals while the epidemiology of the disease calls for its control through proper care before it has become necessary to remove the individual from the home environment. So far as our present knowledge is concerned, it would appear that we have little or no immunity to tuberculosis, but rather we have it within our power to develop greater resistance to the infection as well as the indefinite prolongation of the prodromal period.

The exogenous theory considers the cause of breakdown to be due to a recent reinfection or superinfection implanted on and extending from a latent lesion. If this theory is accepted the control of pulmonary tuberculosis would rest primarily on the isolation of the carrier case, since both the primary infection and the more important superinfection are the results of contact with one who is a tubercle-bacilli carrier. This theory adhered to and carried out would centralize all control measures about the principle of quarantine and isolation.

From an epidemiological point of view both theories are deserving of consideration with the endogenous theory in the light of our present knowledge the more applicable.

Hawes says: "Those of us who are interested in stamping out tuberculosis are gradually coming to realize that no system of sanatoria, no matter how complete and elaborate as to location, number of beds, surroundings, etc., can by itself solve the tuberculosis problem. We have come to realize that the patient's stay at the sanatorium or hospital, short or long, as the case may be, is but an incident in the course of treatment, the most important parts of which are before the patient enters and particularly after the patient has left the sanatorium."

Epidemiology becomes an important element in tuberculosis control and prevention of breakdown in theory; why not in practice? The field work in tuberculosis is equally as important for purposes of control as institutionalization is for treatment. The big problem to-day in tuberculosis work is in the home, the school, and in industry, in fact, the environment. Environment plans for or against each one of us to permit us to live with a latent lesion, or it marks us for breakdown, it reclaims, and to some degree reestablishes the manifest cases among us that eventually become arrested. The field work is too essential to be absorbed by voluntary and lay agencies whose primary interest is not in the epidemiology of the disease. If we are to justify our work we must balance our program as we develop it. Any such balance will emphasize the importance of developing the field work and co-ordinating it with the institutional and administrative elements in the anti-tuberculosis program.

THE
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MINNEAPOLIS, APRIL 15, 1928

YOUR HOSPITAL AND YOUR PROFESSIONAL DUTY

Minneapolis has a thriving industry in its private hospitals to which too little attention has been given in the past. The economic side of this industry in lives saved and rehabilitated has long been recognized, but the value to the city in the number of people employed, the utilization of local products, and the attraction of out-of-town guests has not been stressed.

The Publicity Committee of the Hennepin County Medical Society has carefully investigated the statistics of twelve leading private hospitals and, in conjunction with the Civic and Commerce Association, is attempting to set these facts before the public.

There has long been a feeling voiced, more and more frequently these last few years, by many members of the profession and even more urgently by the lay press, that the physicians are lax in their duty to the public in presenting the facilities and modern advances of medical science.

It is in a hope to contribute our share as a society to the education of the laity that the Hennepin County Medical Society Publicity Committee has entered on a more active phase in its work. The splendid co-operation of the Civic and Commerce Association and the various papers of the city is most gratifying. They realize the need both from the standpoint of news and the economic value to the community.

The following statistics are of interest to prove our point:

Founded: St. Barnabas in 1871; Eitel in 1912.

Five hospitals have Boards of Trustees active.

Five hospitals have made additions in the past ten years.

Two hospitals contemplate new additions.

Total value of plants	$6,379,341
Total number admitted since founding	700,000
Total number admitted in 1927	46,776
Total number operations in 1927 (67 per work-day)	20,284
Average number of operations per day in all hospitals	77
Total number of births in 1927	5,654
Total number of beds	1,842
Total costs of operation in 1927	$2,012,110
Total number of nurses training	964
Total number of employees	1,756
Total number of out-of-town patients (8 hospitals)	6,903
Percentage of out-of-town patients (8 hospitals)	18.5
Charity work	7-10%
American College of Surgeons standard	All

Seven of twelve endowed—from $7,000 to $102,000.

Financially all are o. k. All have operating rooms completely equipped. Eleven have X-ray departments.

Eight have Physiotherapy Departments. Eleven have Nurses' Homes.

But ought not we to be the most interested? Should not our own efforts be the start and finish of this project? The Committee calls on every member of the profession to boost Minneapolis as a medical center; to send to the Committee any news of interest, such as the admission or discharge of prominent people, (let it be known that they have had confidence in the facilities of Minneapolis medicine and others will follow), the newer advances recognized as emanating from Minneapolis, the newsy items from papers read and so forth ad infinitum.

This can and will be ethically submitted to the newspaper and the papers in turn will submit to our censorship of medical news. But let's make for construction as well as censorship.

Submit all items by mail or by phone to the Secretary of the Publicity Committee, 308 Physicians and Surgeons Building, Atlantic 3380.

BEGIN TO BOOST MINNEAPOLIS AS A MEDICAL CENTER TO-DAY AND KEEP BOOSTING!

E. T. E.

A MINNEAPOLIS HOSPITAL SURVEY

A survey of data collected from Minneapolis hospitals shows that Minneapolis is indeed a center for surgery in the Northwest. In 1927 there were over 23,000 operations performed in Minneapolis. This means that on the average working day in our city there were, approximately, 77 operations being performed. This is work done, not only for residents of Minneapolis but also for many people from surrounding towns and neighboring states who came here for advice and treatment.

The greater part of these were major operations as they represent only those done at the hospitals and do not include minor operations and procedures done in doctors' offices, dispensaries, or in operating rooms in the office buildings.

It is interesting to note the different kinds of operations that were done. There were over 6,000 abdominal operations in 1927, in Minneapolis, or more than 20 every working day. Many of them were for ulcers of the stomach or duodenum and include the different types of operations done for this condition, as removing a portion of the stomach or making a new opening or gastro-enterostomy. There were over 700 gall-bladder operations in Minneapolis in 1927, or more than two every day. There were over 900 goiter operations and over 700 bone operations in Minneapolis in 1927.

The eye, ear, nose, and throat men were also busy with operative work. Operations on the eye done in hospitals and not including office work were over 380, while counting ear, nose, and throat operation there were over 7,000 or approximately 23 every day.

Minneapolis has for many years been a center for local anesthesia. A very large percentage of even the major operations can be and are done with local anesthesia. In certain individuals this increases the factor of safety materially. Surgeons in Minneapolis were pioneers in local anesthesia and several instruments have been developed here to facilitate and extend the use of local anesthesia and there are surgeons who are recognized all over the country as leaders in the field of local anesthesia.

In a city of this size there is necessarily a certain amount of emergency surgery on account of accidents and injuries from traffic and automobiles, industrial accidents, and occasional injury by violence, etc. Also sudden development of acute inflammatory conditions may constitute an emergency as acute appendicitis, also ruptured tubal pregnancy, perforated ulcers, strangulated hernias, acute osteomyelitis and many other conditions. To be prepared for these conditions necessitates considerable equipment in the way of buildings, instruments, nursing personnel and surgeons. Minneapolis is fortunate as there are more hospital beds available here than anywhere in the Northwest. The equipment is the best that can be had anywhere and there are many able surgeons well trained and in active service. All of this equipment and the people to manage it have to be ready and waiting for service at all times and it is as necessary that they be provided, equipped and in working order as it is for adequate protection against fire.

W. A. W.

DOCTOR W. A. EVANS

Minneapolis was very much favored the other day by the presence of Dr. W. A. Evans, the editor of the medical articles in the *Minneapolis Journal*. He spoke before the noon meeting of the Hennepin County Medical Society and gave us much of the inside history of the older medical men, notably, Dr. N. S. Davis. Dr. Olga Hansen, of Minneapolis, had written a paper on the early history of the American Medical Association and that necessarily brought in Dr. N. S. Davis, as he was the outstanding man in medical circles and fostered the beginning of the medical associations and certainly the beginning of the American Medical Association. Dr. Evans is the same sort of worker.

Dr. Evans was full of practical demonstrations of what medical men can do; and it was very interesting to hear his account of Dr. N. S. Davis' ways and manners, and his methods both in medicine and in private work. Dr. Hansen's paper will be published later and will give many of us a greater impulse to emulate the methods of older men who were the founders of medicine.

Dr. Evans is a man of very pleasing address—he talks very distinctly and very decidedly to the point. One cannot help but call attention to his articulation, his enunciation, and wonder why the rest of us cannot do equally well. We could if we tried Dr. Evans' method of making a determined effort to pronounce each word carefully and to hold our heads up in such a manner that the sound is transmitted to the audience, reaching every person before the speaker. Dr. Evans illustrates the necessity of doing what they have done in Ramsey County. The medical men there have employed a trained instructor in oratory, and they are having a very clever demonstration of what a few simple methods may do to make doctors clear spoken. This applies to practically the entire medical profession. Most of the speakers make poor attempts at reading or speaking before medical meetings. It is only occasionally that the man reading a paper can be heard, or listened to with pleasure. Most of the time his chin is down on his sternum, and his readings at his abdomen rather than his head being held up and illustrating the manner and method of conveying sounds.

Dr. Evans had a large audience when he spoke at the meeting of the Hennepin County Medical Society, and it is to be hoped that the majority of the members present will remember his direct address, his appearance (young, vigorous, and genial), his method of presenting his subject, and particularly the carrying quality of his voice.

Later in the evening Dr. Evans was the principal speaker at a dinner given by the Lymanhurst staff, a peculiarly energetic group of men having charge of a hospital which combines educational facilities with medical attention for tuberculous children. Dr. Longstreet Taylor, who is president of the National Tuberculosis Association, was also honored by the Lymanhurst staff at a dinner given at the Nicollet Hotel by many of his confréres; over three hundred were present, and short addresses were made by a number of people who were associated with Dr. Taylor or interested in tuberculosis work. Dr Taylor, unfortunately, was ill and unable to be present, but he sent his personal letter to be read at the meeting.

VITAL STATISTICS

This may seem like a cut-and-dried subject but it is very necessary that all doctors who read The Journal-Lancet be urged to read Mrs. Gerda C. Pierson's article, on another page, on "What Is The Value of a Birth Certificate?"

Mrs Pierson has had years of experience in the Vital Statistics Department of the Minnesota State Board of Health, and what she has written is not only well done but clearly outlined and shows the necessity of keeping our records, both of births and deaths, up to date and filed with the State Board of Health for the benefit of future generations.

The paper touches only the main points of the never-ending troubles in endeavoring to have proper records, especially of births. The work of trying to impress upon all physicians who practice obstetrics the importance of these certificates is interminable; and, as has been said before, the Bureau of Vital Statistics has written enough letters during Mrs. Pierson's service "to make up for all those in this world who have written none." And of course a large percentage of these letters have been written by the Department to physicians.

The Journal-Lancet is not only glad to put it before the physicians, but would urge that they consider it as a very important item in their daily work.

HOW TO GET A DOCTOR

There is so much complaint that physicians cannot be found to locate in small towns, we cannot refrain from publishing the following letter recently received in this office:

THE TIOGA COMMERCIAL CLUB
Tioga, North Dakota

March 31, 1928

Journal-Lancet,
Minneapolis, Minn.
Gentlemen:

Please discontinue our advertisement for a doctor as we have gotten one through our advertisement in your paper.

We ran two or three different advertisements for a doctor, and I noticed that we had about 50 repiles to our ad in The Journal-Lancet as against 3 replies from other sources.

Yours truly,
Tioga Commercial Club.
W. E. Berg,
Secretary.

THE SECOND CONFERENCE FOR CLINIC HEALTH AND PARENT EDUCATION

The Second Northwest Conference for Child Health and Parent Education closed its three-day sessions at the Saint Paul Auditorium on March 29, after some forty speakers, of outstanding ability, gathered alike from home and national sources, had given their significant messages to its people.

Attendance upon its fifteen sessions averaged well with that of the Conference held a year ago in Minneapolis. The interest and the keen social consciousness of its hearers was exceedingly well sustained. Its program was well balanced and focussed especially upon the preschool and the adolescent period of child life.

A critical analysis of its work, of the quality of its support, of its financial success, and its educational results will be presented in a later issue.

MISCELLANY

JOHN GROSVENOR CROSS: MEMORIALS

By the Hennepin County Medical Society

John Grosvenor Cross, a trustee of the Hennepin County Medical Society, died at Abbott Hospital, March 3, 1928, after a brief illness.

His father was Dr. Edwin C. Cross, a pioneer physician of Rochester, Minnesota, who came from Bradford, Vermont, with his wife in 1868, to make his home in the western world. John Grosvenor Cross was born May 8, 1870 and as he grew older attended the public schools of Rochester and the University of Minnesota, from which he was graduated in 1892. His medical course was taken at Northwestern University, from which he obtained his degree in 1895. After this he practiced at Rochester for seven years and then went to Vienna, where he studied for two years, beginning in 1902.

Upon his return, in 1904, he limited his work to internal medicine and began the practice which he carried on actively up to the time of his death.

In 1893 Dr. Cross was married to Frances Montgomery, of Minneapolis, who with two sons, Grosvenor M. and Roderic M. Cross, and a daughter, Louise, survives him.

Along with his medical practice Dr. Cross was always ready to work earnestly on matters of medical education and organization. In 1916 he was president of the Hennepin County Medical Society and in 1917-18 of the Minnesota Academy of Medicine. He had been on the faculty of the University of Minnesota Medical School and chief of the medical division of the Minneapolis General Hospital. He was also a member of the Minnesota Society of Internal Medicine. A number of articles on medical topics have been furnished by his pen to the medical periodicals during his years of practice. Northwestern, Hillcrest, Abbott, and St. Mary's Hospitals—all were proud to have him on their staff lists.

He was a member of the Minneapolis Club, the Nu Sigma Nu, and Chi Psi fraternities, and of St. Mark's Episcopal Church.

Dependable, earnest, unflinching in his duty, unfailing in his industry, he has always been a force in this state and in this community, working towards the building up of ideals and standards of medical excellence.

By the Staff of the Abbott Hospital

In the passing of Dr. J. G. Cross we have lost one of the outstanding men in the profession. Always earnest, painstaking, and sincere, he won the high regard of his fellows for the excellent quality of his work and the considerable mental capacity and the sagacity he brought to bear upon its numerous and perplexing problems. He had a warm, broad sense of humor and a personal charm which endeared him greatly to those who came into close contact with him, both among his professional fellows and among his patients. His professional friends held him in high esteem as a man of honor and a man of worth. He made it a point never to speak ill of anyone. His circle of friends was wide and increased as the years rolled on. However, he had a mild reserve and a feeling of personal dignity which naturally tended to limit the number of those who knew him well, but among those he numbered life-long friends.

To his patients he was more than a physician. He showed an interest which touched their personality broadly, a human interest in them which endeared him greatly to large numbers of those who came to him in a busy practice.

Born in Rochester, Minn., May 8, 1870, where he spent his childhood and youth, he returned there for the early years of his medical practice (1895-1902), after his graduation from the medical department of Northwestern University (1895), and then came to Minneapolis, where he soon began to make a place for himself, honored, respected, and admired. He made a good beginning in his friendships while at the University of Minnesota, where he took a B. S. degree before studying medicine at Northwestern. As a member of the Chi Psi fraternity he was very happy, and many of the fine friendships begun at this time have endured throughout his life.

His professional life spans thirty-three years, seven at Rochester and twenty-six at Minneapolis. During this time he was a careful and fairly constant writer on subjects in the general field of medicine in which he was interested. "Chronic Arterial Hypertension," "Causes and Care of Arterial Hypertension," "Notes on Heart Block" are among the titles of his most recent papers, and "Factors in Prognosis of Heart Disease" was just completed and ready for the printer three days before his death, March 3, 1928.

Dr. Cross was a musician of considerable skill, an interested member of St. Mark's Church, and was on the Hospital Staffs of the Abbott, Northwestern, Hillcrest, St. Mary's and, at one time, the St. Barnabas and the City Hospitals and the teaching staff of the University Medical School.

NEWS ITEMS

ANNOUNCEMENT

Reports of two interesting medical meetings held the latter part of March in the Twin Cities (the Fourth Medical Staff Banquet of the

Lymanhurst Staff in Minneapolis and the Second Northwest Conference for Child Health and Parent Education in St Paul) are held for our next issue.

Dr. Joseph Allaire has moved from Plaza, N. D., to Tioga, N. D.

Dr. C. Houston has moved from Watford City, N. D., to Yorkton, Saskatchewan, Canada.

Dr. Thomas Myers, of St. Paul, is travelling in Europe, visiting the principal pediatric clinics.

Enough stock has been sold to assure the early building of a community hospital at Isanti, Minn.

Dr. Clinton Smith, of Devils Lake, N. D., is at home after an extended trip through the East and South.

Dr. O. B. Bergman, of Janesville, Minn., has taken over the practice of Dr. H. W. Hefke at St. James, Minn.

Dr. Hans Hefke, who recently sold his practice at St. James has received an appointment in the Mayo Clinic.

Dr. A. E. Olson, of Duluth, has returned from Vienna and Budapest, where he spent five months in the clinics of those cities.

Dr. D. W. Lynch's Sanatorium at West Bend, Wis., has opened an auxiliary sanatorium at 532-534 Bedford Ave., Milwaukee, Wis.

The Augustana Lutherans of Minnesota voted at their annual Conference last month to build a hospital in St. Paul at a cost of $250,000.

Dr. Wayne P. O'Brien, of Egeland, N. D., has become a member of the staff of the Battle Mountain Sanitarium at Hot Springs, S. D.

Dr. G. A. Lierle, of the Canova Hospital at Canova, S. D., went to the bedside of his sick grandson by air-plane from Canova to Quincy, Ill.

Dr. J. J. Heimark has moved from Fargo, N. D., to Blue Earth, Minn. Dr. Heimark is a graduate of the Medical School of the U. of M., class of '20.

Dr. H. H. Culbertson has moved from Forsyth, Mont., to Billings, Mont., and joined the firm of Drs. Movius, Bridenbaugh, and Nelson, of that city.

Dr. J. A. Malmstrom, a recent graduate who has just completed his internship in St. Mary's Hospital, Duluth, will locate at Virginia, Minn., for practice.

Dr. A. A. Whitmore, State Health Officer of North Dakota, has called a meeting of the State Health Officers' Association to be held in Fargo on May 2 and 3.

A radio committee of the Minnesota State Medical Association is having health talks broadcasted once a week, on Wednesdays, at 10 A. M. over WCCO.

The first diabetic clinic ever given in Minneapolis was held last month at the General Hospital, before a group of patients, by Walter E. List, Supt. of the Hospital.

Dr. L. W. Allard, of Billings, Mont., is leading a movement to combine the efforts of the orthopedic hospitals of the state in behalf of the crippled children in the State.

Dr. J. E. Crewe, of Rochester, Minn., gave the weekly health talk in the lobby of the Mayo clinic on March 22. His subject was "Cultivating Resistance to Disease."

Dr. Simon Foster, a member of the staff of the Battle Mountain Sanitarium at Hot Springs, S. D., has been transferred to the National Home at Leavenworth, Kans.

Dr. James O. Lee, who recently moved from Vermillion, S. D., to Canton, S. D., has opened a ten-bed hospital in the latter place, and the hospital is open to all ethical physicians.

Dr. Campbell Sansing, of the Veterans' Bureau at Dallas, Texas, has succeeded Dr. H. A. Myers in the Veterans' Hospital at Fargo, N. D. Dr. Myers has gone to Washington, D. C.

Dr. L. H. Fligman, of Helena, Mont., received the honor of re-election to the Board of Governors of the American College of Physicians at its annual meeting in New Orleans last month.

Dr. John E. Schwendener, of Bryant, S. D., died last month at the age of 52. Dr. Schwendener was a graduate of Rush, class of '02, and he began practice in Bryant soon after his graduation.

The Moose Lake (Minn.) Hospital, which has been closed for several months has been opened and is now in charge of Drs. Moe, of Moose Lake; Dr. Blakely, of Barnum; and Dr. Ehmke, of Willow River.

Dr. W. A. Jones, of Minneapolis, Editor of The Journal-Lancet, is Chairman of the Local Committee on Arrangements for the A. M. A. meeting in Minneapolis in June. The work of the committee is very strenuous.

Dr. F. E. Clough, who was on the staff of the Homestake Hospital at Lead, S. D., for twenty-five years, and was its chief surgeon of late years, has moved to Rapid City, S. D., which is one of the finest cities of the state.

A very kindly, efficient, and generous hospital superintendent died in Minneapolis this month, Mrs Sarah Harrison Knight, who founded Asbury Hospital in 1891 and acted as its superintendent and benefactor until her death.

It has been practically decided that the tuition of students in the Medical School of the University of Minnesota will be increased from $70 to $100 per quarter for non-resident students and from $60 to $75 for resident students.

The new wing of the Wright Memorial Hospital, of Fergus Falls, adds twenty rooms to the capacity of the hospital, and all the rooms are tastefully furnished and have modern conveniences. The addition was opened last month.

Dr. Arthur J. Doty, of Colman, S. D., died last month at the age of 63. Dr. Doty was a graduate of the College of Medicine of the Illinois University, class of '92, and located in Dakota in 1897. He was prominent in Masonic circles.

Special attention will be given to preventive medicine at the annual meeting of the South Dakota State Medical Association to be held in August at Hot Springs, and also to giving guests and members a good time, including a trip through the Black Hills.

Dr. E. M. Meadows, of Oakes, N. D., died on April 4, at the age of 46. Dr Meadows graduated from the Medical School of the University of Western Ontario, Canada, class of '02, and came to North Dakota in 1903, where he practiced until his death.

The biennal report of the Western Minnesota Hospital at Graceville, Minn., shows the work of a very successful hospital, which is rated as an accredited hospital by the American College of Surgeons, and is sustained without contributions from the public. Dr. C. I. Oliver is its Surgeon-in-Chief.

A special train on its way to the National Tuberculosis Convention will be in Minneapolis on Friday, the fifteenth day of June. This train arrives in the morning and departs in the evening, stopping over the one day so as to allow its passengers to participate in the last session of the American Medical Association. Anyone who wishes to make arrangements for this trip can do so through the Northern Pacific Railway.

Minneapolis and St. Paul will be able to provide satisfactory hotel accommodation for persons who come to the annual meeting of the A. M. A. in June, but it is wise to make hotel reservations in advance. The chairman of the subcommittee on hotels is Dr. F. G. Benn, 1114 Donaldson Building, Minneapolis.

Dr. William M. Newhall, of Long Lake, Minn., died last week at the age of 71. Dr. Newhall was a graduate of Rush, class of '83, and practiced in Red Wing, Minn., until 1886, when he moved to Minneapolis. He remained in Minneapolis until 1898, and then moved to Long Lake, where he practiced until the time of his death.

Dr. W. A. Evans, of Chicago, the well-known syndicate writer of papers for the press, including the *Minneapolis Journal,* was in Minneapolis to speak at the annual Lymanhurst Staff dinner last month. He spoke at the Lymanhurst meeting and also before the Hennepin County Medical Society. He is a versatile and delightful talker.

A splendid and hopeful movement has been begun in Cass County (Fargo), North Dakota, in health matters. All health agencies in the county are to be co-ordinated. Directed by medical and other professional men in and outside of the cities of the county the over-organized groups welded into full co-operation can be made a great force.

Dr. Alexander S. Begg, Dean of the Medical School of the Boston University, will give the commencement address at the annual commencement of the University of South Dakota at Vermillion in June. Dr. G. G. Cottam, of Sioux Falls, will present a memorial on Dr. Frederick A. Spafford, of Flandreau, who was a member of the Board of Regents of the University for many years.

The following orthopedic surgeons of the Northwest will be demonstrators of exhibits for fractures made at the Minneapolis session of the A. M. A. in June: Dr. L. W. Allard, Billings, Mont.; Dr. C. N. Callander, Fargo, N. D.; Dr. C. C. Chatterton, St. Paul; Dr. P. W. Giessler and Dr. M. O. Henry, Minneapolis; Dr. M. S. Henderson, Rochester, Minn.; and Dr. E. P. Quain, Bismarck, N. D.

The physicians at Dallas, S. D., in order to protect themselves from a class of patients who do not pay for their services, have decided to decline their services to those patients who are in arrears and who have made no arrangement for further extension of credit. Owing to the fact that there is a certain class of patients who change from one doctor to another to avoid paying for the services, the physicians have been compelled to thus unite and a list of delinquents will be furnished each physician by the others. Practically all the doctors in the Rosebud have united in this effort to collect from a certain class the pay for their hard work.

Northwestern District Medical Society of North Dakota

The regular monthly meeting of the Northwestern District Medical Society, of North Dakota, was held on March 28 at St. Joseph's Hospital, Minot. Dinner was served by the hospital at 6:15.

No business was transacted. Clinical cases as follows were presented:

By Dr. J. L. Devine:

Three cases of meningitis, of differing types.

By Dr. P. A. Nestos:

Arsenic poisoning.

By Dr. Angus Cameron:

Parotitis following prostatectomy.

Two cases of cerebrospinal meningitis.

Dr. J. L. Lamont, of Dunseith, Medical Director of the State Tuberculosis Sanitarium, also secretary of the North Dakota State Medical Society, was the guest of honor. He gave a talk on tuberculosis, illustrated by lantern slides. The fact that numerous questions were asked, and the paper was discussed at length, indicated how well the paper was received.

The following members were present: Drs. Cameron, Devine, Erenfeld, Fardy, Halvorson, Hurd, Hanson, Haraldson, Hood, Kermott, Kolb, McCannel, Nestos, J. R. Pence, Ransom, Sorenson, Sinamark, Wheelon, Yoemans. Guests were Drs. R. W. Campbell, of Bisbee; E. R. Sampson, of Minot: and Mr. H. D. Feasel, of Dunseith.

Andrew Sinamark, M.D.
Secretary.

The Aberdeen District Medical Society of South Dakota

The March meeting of the Aberdeen District Medical Society was held Tuesday evening, March 20, 1928, at the Aberdeen Chamber of Commerce. About forty doctors in the district were present at the meeting.

The following program was presented:

1. "Local Anesthesia in Cervical Repair." By Dr. E. A. Pittenger, Aberdeen, S. D.
2. "The Ketogenic Diet in Epilepsy." By Dr. Clifford J. Barborka, Mayo Clinic, Rochester, Minn.
3. "Business Aspects of the Medical Profession," By Mr. D. L. Braskamp, Aberdeen, S. D.
4. "Medico-Legal Aspects." By Mr. L. T. Van Slyke, Aberdeen, S. D.,

It was decided to hold a special meeting some time in April to consider "Medical Economics," and the Committe was also appointed to revise the fee schedule.

R. G. Mayer, M.D.
Secretary,

The Huron District Medical Society of South Dakota

The Huron District Medical Society held their monthly meeting Thursday evening, April 5, at the Marvin Hughitt Hotel, Huron. After a 6 o'clock dinner the following program was rendered: A. P. Scheib, of Hitchcock; Dr. B. H. Sprague, of Huron, "Hyperthyroidism;" Dr. J. F. Paddleford, "Intestinal Infection in Children."

The Spafford Memorial Committee of the South Dakota Medical Association, co-operating with President R. L. Slagle, have placed with the South Dakota Endowment Association $1,000, the income of this fund to be used for an annual scholarship in Vergil, in memory of Dr. Spafford.

The South Dakota State Medical Association through this committee contributed $349.79. President R. L. Slagle personally added $605.21, making this endowment $1,000.

This fund, as stated above, is invested in a first mortgage on real estate with an annual income of $60. At the graduating exercises to be held on Monday morning, June 4, the establishment of this prize will be formally announced by Dr. G. G. Cottam, of Sioux Falls, an intimate friend of Dr. Spafford.

J. F. D. Cook, M.D.

Meeting of the Councilors and Officers of the South Dakota State Medical Association

At a meeting of the officers and Board of Councilors of the South Dakota State Medical Association at the call of President Dr. S. M. Hohf, at Huron, March 28, the following officers and Councilors were present at a noon luncheon:

Officers present: Dr. S. M. Hohf, Yankton, President; Dr. N. K. Hopkins, Arlington, Vice-President; Dr. L. N. Grosvenor, Huron, Second Vice-President; Dr. J. F. D. Cook, Langford, Secretary-Treasurer.

Councilors present: Dr. R. D. Alway, Aberdeen; Dr. H. W. Sherwood, Doland; Dr. O. R. Wright, Huron; Dr. Frederick Treon, Chamberlain; Dr. J. P. Isaac, Freeman; Dr. A. G. Allen, Hot Springs; Dr. A. E. Bostrom, De Smet; Dr. G. E. Burman, Carthage.

Dr. S. M. Hohf, presiding, called on Mr. Donald D. Jenne, of the U. S. Fidelity and Guaranty Co., to present the subject of group insurance. After a full discussion a plan was outlined to be presented to the House of Delegates at the annual meeting, August 7, 8, and 9.

Dr. Hohf presented the matter of a Basic Science Law, and after animated discussion plans were outlined to be presented to the House of Delegates by the Committee on Legislation. Dr. J. P. Isaac, chairman of the Committee on By-Laws, reported a draft of the proposed by-laws and the Council recommended the presentation for consideration and adoption by the House of Delegates.

Dr. R. G. Allen of Hot Springs, representing the Black Hills Medical Society, presented a provisional program in which he outlined the available hospital facilities for the clinics at the Hot Springs meeting. He also presented a very interesting program of entertainment during and following the session, including a trip through the Hills to Deadwood for "The Days of '76."

Secretary Cook presented a financial report and outlined the needs of the Legislative Committee for funds to carry on recommended legislation. The matter was fully discussed by the officers and a motion by Dr. A. E. Bostrom, seconded by Dr. J. P. Isaac, that a special per capita assessment of $5.00 be made to be used for the purpose of legislation by the Legislative Committee. On vote this motion carried.

Secretary Cook presented the necessity of establishing new boundaries for the various districts of the state, which was adopted as outlined by the secretary.

Secretary Cook presented a report of the South Dakota Public Health Association activities also that of the Social Hygiene Association, asking that the officers acquaint themselves with the activities of these associations in their districts and present at the annual meeting such recommendations as they may deem advisable for a fuller co-operation with these lay associations.

Secretary Cook and Dr. N. K. Hopkins reported on the Regional State Medical Association Officers Conference, held at Saint Paul in the Saint Paul Hotel, on invitation of the Minnesota State Medical Association, January 15, 1928. The plan outlined by Dr. Braasch, of Rochester, and Dr. Meyerding, of Saint Paul, for a regional organization comprising the states of Wisconsin, Minnesota, Iowa, North Dakota, and South Dakota. Iowa was invited but was not represented at this meeting. A temporary organization was formed with Dr. Braasch as president and Dr. George Crownhart of Madison, Wisconsin, as secretary. It was decided to meet at Minneapolis the day preceding the meeting of the A. M. A. and at this time perfect the organization and outline a definite program. Object, to better acquaint these state organizations with their mutual requirements and formulate such plans and policies as may be of mutual interest to our various state associations, looking toward full co-operation in matters pertaining to public health and welfare, legislative policies, education, and publicity.

J. F. D. Cook, M.D.
Secretary State Medical Association.

North Dakota Practice for Sale

A $6,000 cash practice and a paying drug-store in connection. Address 464, care of this office.

Practice for Sale

Fine opening for a doctor in a North Dakota town of 1800 people. Large well-settled territory, only one other doctor. A $9,000 practice. Collections 90 per cent. Nothing to sell but office equipment. Ill health reason for selling. Address 468, care of this office.

Substitute Work or Location Wanted

An experienced physician is available at once to do substitute work. Address 456, care of this office.

Office Position in Minneapolis Wanted

By a woman of large experience in physicians' office. A high-grade stenographer and expert in history-taking, capable of managing a large clinic or a specialist's work. Satisfactory references given. Address 434, care of this office.

Specialist Wanted

A young eye, ear, nose, and throat man, preferably a Scandinavian, by a small group of Twin City men. Salary at start, leading to partnership. Address 469, care of this office.

Office Space for Rent in Central Distrirt of Minneapolis

Two beautiful rooms and reception room in common with a group of physicians. Access to *x*-ray and clinical laboratories and metabolism apparatus. Free parking space for doctors' and patients' automobiles. Fifty dollars a month, or on a percentage of income. Address 466, care of this office.

For Rent

Will rent modern residence, (furnished), medical library with fully equipped office, also drugs, $20.00 monthly. One year lease. Beautifully located in railroad town one hour's ride from Twin Cities. Practice just right. Must pay wholesale for drugs, keeping perpetual invoice. References, only responsible parties need apply. Address 470, care of this office.

For Sale

Fully equipped, well-located office. Exceptional opportunity for some doctor. Town 7,500; hospital connections; Victor *X*-ray machine; Acme Diathermy; Burdick Quartz Light, water and air cooled. Complete genothalmic optical unit. Wish to dispose of at once. Doctor deceased. Terms to suit. Write for further particulars. Mrs. P. C. Davison, Willmar, Minn.

Practice for Sale

In Southern Minnesota. $25,000 medical and surgical practice; county-seat; population 4,000; city hospital; complete up-to-date office equipment with 10,000 case records, by two men in partnership established seven years. Practice and equipment sacrificed to purchasers of modern residences. Or will sell equipment and practice separately. Will introduce. Liberal terms. Address 465, care of this office.

Position Wanted

By a woman registered *x*-ray technician, graduate in clinical laboratory work, experienced in physiotherapy, metabolism, some hospital nursing, operating room technic and anesthesia. A No. 1 book-keeper, experienced in business management, secretarial work, histories, etc. Ten years experience in hospitals and clinics with fifteen years business experience. Prefer business management or *x*-ray work but will combine to suit employer. Ex-

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CHRONIC GASTRO-INTESTINAL DISEASES AND THEIR INTERPRETATIONS*

By J. M. Lajoie, M.D.
MINNEAPOLIS, MINNESOTA

I consider it a privilege to take part in this seminar on diseases of the gastro-intestinal tract. Being first on this series, it seemed best to choose as my subject something having to do with the interpretation of some of the symptoms that present themselves in studying a patient who has chronic gastro-intestinal disease. The acute gastro-intestinal diseases are intentionally omitted at the time. However, before speaking of the interpretation of symptoms, I wish to say a few words about the collecting and recording of data.

COLLECTING AND RECORDING DATA

In order to make a positive diagnosis, instead of an assumptive diagnosis, in a large percentage of our patients we must get and record a careful history which will bring to light the facts. This procedure must be followed by a careful examination to bring out other facts. If we miss the kernel in these two procedures we still have one more chance, though it will be a little late to be of any benefit to the patient, and that is a pathologic diagnosis at the morgue, if pathologists were clever enough to make a postmortem diagnosis every time. Be it remembered that the theory of diagnosis is in no essential degree different from the theory of natural science in general. Always the progress of method is the same: assembling data, analysis, and induction.

It is an art to secure a complete and accurate history of a patient's illness. It is much the same as the cross-examination of a witness by an acute lawyer. The physical examination is wholly an art, and the accuracy of the observations made depends entirely upon the technical proficiency of the physician. Diagnosis, then, is a science and an art, a science in the method of using the facts secured, an art largely in the mode of collecting the facts.

In chronic illness it is frequently necessary to obtain from the family or friends additional facts which will throw more light on the history of a typical attack, preferably the most recent attack. Then determine the difference presented by other attacks. Next, ascertain if the occurrence of the attacks has any body function or environmental influence (eating, time of day, emotions) and their relation to it. The patient's statements of causative factors should not be accepted except as a basis for investigation. Finally, learn what has been found to relieve the attacks, especially the more recent ones, and whether the attacks are regular or irregular, increasing in frequency or diminishing. Note the treatment received and its effect on the condition.

A chronological history devised by Adolph Meyer for psychic disorders is of great help in the diagnosis of functional digestive disorders. The constant aim should be to detect the earliest degree of serious organic disease. Carcinoma of the gastro-intestinal tract is usually recognized too late for successful treatment, and a large number of cases of ulcer first undergo treatment for functional disorders. Unless one is willing to spend the necessary time in getting a complete history of the case he will frequently miss the diagnosis in disease of the gastro-intestinal tract.

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*Presented before the Hennepin County Medical Society, November 16, 1927.

There are three important requirements which must be well understood if one is to consider properly the symptoms of chronic gastro-intestinal disease. First, one must have a good working knowledge of gastric and intestinal physiology, especially the physiology of smooth muscle; second, the embryology of abdominal organs and their nerve supply, and, third, a real appreciation of the value of a careful history.

Four main causes for digestive disorders must constantly be kept in mind:

1. Organic disease (cancer).
2. Reflex symptoms from diseases outside of the tract (pelvic disease).
3. Systemic disease (tuberculosis; cardiac disease).
4. Functional disorders (neurosis).

Remember, however, that a neurotic may develop cancer and that every patient over forty, with gastro-intestinal symptoms, deserves a careful examination in order to exclude this disease.

PHYSIOLOGY OF THE GASTRO-INTESTINAL TRACT

According to Cleaver[1] the mucosa of the alimentary tract is not sensitive to tactile, thermal, or chemical stimuli except in that portion from the teeth to the pylorus. Acid regurgitation into the esophagus has been thought to produce heartburn, but recent experiments do not confirm this. Although the mucosa of the stomach is only sensitive to thermal stimuli, Ryle states that in health it has a sensibility of its own, namely: (1) hunger, (2) appetite, (3) satisfaction, and (4) repletion. He states, further, that appetite may occur without hunger but that hunger seldom occurs without appetite. When one is satisfied there is no sensation. The muscle fibers are in normal posture, that is, they are relaxed. Satisfaction, then, is a realization of the absence of sensation.

Some years ago Cannon advanced the theory that the pylorus was controlled by the acid in the stomach. It is doubtful that HCl forms the major part in the control of the pylorus. "When a bolus of food passes into the upper end of the esophagus, there is relaxation ahead and below it and contraction above and behind it. The bolus requires about five seconds to pass the entire length of the esophagus. When it reaches the lower end of the esophagus, the cardiac sphincter relaxes and a reflex inhibition of the stomach musculature takes place to receive the bolus. In the stomach the contractions occur in faint waves, beginning at the cardiac end and passing to the pyloric end, all the time increasing the depth of their amplitude until arrival at pyloric antrum. Any interference with the passage of the wave along either curvature may cause failure to arrive synchronously at the pylorus and thus result in reflex peristalsis, which may cause nausea and vomiting. The arrival of a wave at the pylorus is followed by a relaxation of the pylorus and a filling of the duodenal bulb. Under normal conditions a barium meal, after four or five hours, begins to enter the cecum. Here both peristaltic and antiperistaltic waves occur. In about ten hours the meal has reached the splenic flexure and, in from eighteen to twenty-four hours, it normally reaches the rectum."

Alvarez has shown that the circular fibers contract after removal of Auerbach's plexus, indicating that the mechanism producing peristalsis is in the wall of the gut. He has also shown that smooth muscle is more sluggish than striated, is slower to react and slower to assume the relaxed state. It is able to maintain firm and lasting contractions without fatigue; reacts to tension and shortens under the influence of direct irritation.

A passing mention should be made of the parasympathetic and the sympathetic nervous system. The abdominal viscera are connected, through the sympathetic nervous system, with certain definite segments of the spinal cord. The nerve connections of the stomach are related to the 6th, 7th, and 8th dorsal segments; the duodenum to the 9th; the appendix to the 7th and 8th; the colon to the 11th and 12th; the liver to the 6th to the 10th; the gall-bladder to the 10th, and the pancreas to the 10th and 11th dorsal segments. The dorsal segments have their nerve connections with the skin, muscle, and connective tissues of the abdominal parietes. Efferent fibers travel both in vagus and sympathetic; afferent (coming to brain) fibers mainly to the sphincters; and the vagus through Auerbach's plexus to the muscles of the visceral wall.

Ivy[2] has recently brought to our attention some interesting facts regarding gastro-intestinal physiology. Briefly summarized, they are as follows:

Impulses that stimulate flow of gastric juice he divides into three kinds:

1. Cephalic, by reflexes through the cerebral cortex or
   by reflexes through the thalmus and the midbrain or
   medulla, the vagi being the sole pathway.
2. Gastric, by stimuli set up by a distended stomach or
   by chemical action on the mucosa produced by substances in the food.
3. Intestinal, by the absorption by the intestine of chemical substances in the food.

So stimuli originating in either the brain, the stomach, or the intestine will cause the secretion of gastric juice.

In studying the highly important external secretion of the pancreas it was also found that the pancreas has a cephalic phase and an intestinal phase, there being no gastric phase. The intestinal phase is probably brought about by the action of the hormones, which have been demonstrated in the venous blood of the intestine.

It has generally been believed that the vagus carries inhibitory impulses and that the splanchnics carry motor impulses to the cardiac and pyloric sphincters. Ivy states that Carlson, Litt and Thomas have demonstrated that the action of the sphincters to nerve stimulation and to drugs depended on the condition of the sphincters. If the sphincters were relaxed, the stimuli caused contraction; if contracted, they relaxed. It follows, then, that cardiospasm or pylorspasm may be due to reflexes over either the vagi or the splanchnic nerves.

Another general belief held for some time is that reverse peristalsis normally occurred only in the proximal colon and abnormally in the stomach, but Ivy finds, as have Wheelon, Alvarez, Keeton, and Spencer, that antiperistalsis may occur anywhere in the gastro-intestinal tract.

Again, Ivy and others have shown that hunger contractions are due to some changes (hormones) in the blood; that thyroglobulin and fibrinogen may be absorbed normally from the intestinal tract without being broken down (digested); and, that the important factor in controlling the outflow of bile is the motility and the tonus of the duodenum.

Some people experience abnormal sensations in the stomach, such as a sense of heat, cold, heaviness, constriction, and beating. These are symptoms merely originating in the nerves of the stomach. The common symptoms found in gastro-intestinal disease are the following: nausea, vomiting, anorexia, waterbrash, heartburn, flatulence, and pain.

Nausea.—Nausea, in which severe peristalsis in the stomach occurs, also belongs in the class of abnormal sensations. The sensation may be produced by stimulation of the nerves in the gastric mucosa or of the sensory fibers outside of the stomach. At times it is found associated with organic disease and at other times organic disease is absent. The common causes are eyestrain, starvation, and chronic appendicitis. When it is a reflex symptom of chronic appendicitis, it is apt to occur immediately after a meal. Nausea has been called "dilute vomiting," and many of the conditions causing it will eventually cause vomiting. Associated with it may be a feeling of general weakness with headache, dizziness, and chills.

Vomiting.—Vomiting results from stimuli acting either directly or reflexly on the vomiting center. Those acting directly are toxic in nature, as tobacco. Those acting reflexly include stimuli from the stomach itself, besides stimuli from other parts of the body. These may be classified under three headings:

1. Gastric, as improper food; excessive food; irritant poisons; gastric ulcer, cancer, and hepatic cirrhosis.
2. General visceral causes, as appendicitis and peritonitis; internal obstruction; Dietl's crisis; pelvic disease; pulmonary tuberculosis; violent coughing; shock from blow on solar plexus.
3. Through central nervous system, as—
   a. through sense of taste, smell, and sight.
   b. brain, concussion, meningitis, hemorrhage, tumor, seasickness, and hysteria.
   c. through spinal cord, as gastric crisis.

Anorexia.—Anorexia is loss of appetite, and it occurs when there is diminished tone or muscular rigidity of the stomach due to fatigue, worry, or emotion. Tone is also impaired in acute fevers and in chronic systemic disease. Loss of appetite is often found associated with visceroptosis with an associated hypotonus of the stomach. Carcinoma of the wall of the stomach causes loss of appetite, and the absence of free HCl often does the same.

Frequently patients having normal appetites are afraid to eat because food causes distress. A poor appetite with rapidly developing sense of fullness suggests structural disease of the stomach or a hypotonic stomach, while a good appetite with a rapidly developing sense of fullness suggests a small hypertonic stomach, as in disease of the bile passages.

Waterbrash.—Waterbrash is the regurgitation of clear, tasteless fluid. This condition may occur as a symptom of gastric ulcer and, for months, may be the only prominent symptom of cancer of the stomach. After a heavy meal, and without nausea or vomiting, regurgitation of food may occur, due to relaxation of the cardia. It also occurs during fatigue, anxiety, and in cardiospasm.

Heartburn.—Heartburn may occur in gall-bladder disease, pregnancy, chronic appendicitis, visceroptosis, and, rarely, in duodenal ulcer; or it may be a persistent symptom for years without any demonstable organic lesion.

Flatulence and Discomfort.—Epigastric fullness and discomfort is usually caused by gastric flatulence. In the short or hypertonic type of stomach, discomfort commences shortly after eating, in patients having gall-bladder disease; while in the long, hypotonic type there is a sense of fullness in cases of visceroptosis, pyloric obstruction, and dilatation.

Swallowed air causes flatulence in about 90 per cent of the cases. It may be due to regurgitation of gas from lower down, to the diffusion ot gas through the stomach wall, or from fermentation in pyloric obstruction. A feeling of pressure high in the epigastrium, often under the sternum, and sometimes widely diffused throughout the chest, is a symptom of gastric flatulence. Flatulence seldom produces pain but often causes intense discomfort. It is frequently found in those individuals who overeat or in those who have a relaxed cardia after eating. If it occurs thirty or forty-five minutes after meals it is frequently a symptom of gall-bladder disease. When discomfort is acute the patient swallows air and forces the cardia, by which he appears to get relief, although there is very little change in the amount of gas in the stomach.

Pain.—Sir James Mackenzie (The Future of Medicine) states that the production of pain is due to stimulation of certain cells in the central nervous system and that the location of the pain is in a field definite and distinct in the peripheral distribution of nerves from these cells. Regions in which pain is felt in painful peristalsis of the different portions of the gastro-intestinal tract are as follows:

1. Esophagus—lower sternal region.
2. Stomach—epigastric region.
3. Small bowel—umbilical region.
4. Large bowel—hypogastric region.

Two reflexes may be associated with pain: the viscerosensory reflex, shown by pain and hyperalgesia of the skin; and the visceromotor reflex, shown by pain and muscular resistance on pressure over a diseased organ (hyperalgesic muscle).

A stimulus may excite any nerve center which it reaches, and such nerve center reacts according to its function: a secretory center by modification of secretion; a nerve center supplying muscle by contraction of the muscle; a sensory nerve center by pain, and hyperalgesia in its peripheral distribution. A single stimulus may not cause pain, but a summation of such stimuli may cause severe pain, as in contraction of hollow viscus. A tight shoe is not painful at first but soon becomes unbearable.

"Visceral pain is by far the most significant symptom in chronic gastro-intestinal disease, and in its investigation we must consider several points. It is very important to see the patient while he is having the pain as he is then able to define its character and radiation and his description can be verified by palpation for rigidity, mass or tenderness.

1. Character of pain—Is it intermittent or continuous?
2. Type of pain—Is it burning, boring, dull, or acute?
3. Is it general or localized?
4. Radiation of pain.
5. Timing of pain—its relation to functioning of stomach or gall-bladder.
6. Is pain relieved by food, alkalies or vomiting?
7. Is pain increased by food or acids?
8. Is pain continuous—does it recur day after day after the same meal or meals? Are there intervals of weeks or months of entire freedom from pain?
9. Is pain aggravated by exercise?

Visceral pain is of four varieties:

1. Constant.
2. Intermittent.
3. Postural.
4. Capsular.

"Excessive muscular contaction and the stretching of contracted muscles produce intermittent pain. In gastric ulcer at or near the cardia there is little or no pain. There are no marked muscular contractions at the cardiac end of the stomach and the wave amplitude is small".

Gastric ulcer involving only the mucous coats of the stomach does not produce pain. Dilute HCl introduced through a tube produces no sensation. A gastric ulcer which has existed over a long period frequently loses its character of periodicity and becomes continuous. Taking soda or emptying the stomach frequently relieves the pain of gastric ulcer, perhaps by lessening of muscular spasm. The intermittent type of pain is found in duodenal ulcer. It occurs from one to four hours after meals. Pain may occur after every meal and during the night. It varies in character just as in gastric ulcer and may be burning, tearing, gnawing, etc. The location of the pain in the epigastrium is variable and is frequently limited to the left of the median line and above the umbilicus, yet it may be localized on the right side. The pain of duodenal ulcer is relieved practically always by taking food, frequently by soda bicarb., but rarely by drinking water. Pressure often gives ease. Duodenal ulcer may give symptoms for weeks with daily history of pain, and then be followed by a remission of symptoms for months or years.

A certain group of patients do not have pain but have nausea, distress, discomfort, and even heartburn occurring with definite periodicity. A smaller group present a pain picture simulating ulcer. The pain occurs with definite periodicity but presents only for a few days at a time and does not always occur after the same meal. This type is also relieved by food. Frequently we find no evidence of an intrinsic lesion in the duodenum but find evidence of an extrinsic cause, as appendix, cecum or gall-bladder. Continuous or peritoneal pain is persistent, gradually increasing in intensity and associated with constitutional symptoms of peritonitis. Postural pain arises when the tissues are pressed or stretched and is relieved by change of posture. Cases of lymphangitis and perilymphangitis extending from ulcer or carcinoma are examples. Capsular pain is constant in character and occurs when the liver, spleen, etc. are inflamed and have enlarged rapidly.

In closing, may I leave a thought which I hope will help you as it has helped me, and that is this: If we are to avoid mistakes we must be sufficiently individual in our diagnosis and treatment. We must consider every patient as a special case, a unique example, always mindful that we are dealing with an illness more or less complex in an individual who is also more or less complex, and that the application of what little knowledge of the laws of nature we may have will repay us well for our efforts.

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THE MODERN TREATMENT OF VARICOSE ULCERS*

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By the term varicose ulcer I mean those ulcerations occurring in the lower extremities associated with a varicosed condition of the veins, more correctly called ulcer cruris.

The predisposing cause forming the fertile field for these ulcerations is primarily one of deficiency in the venous circulation of the extremity and the development of the condition commonly spoken of as varicose veins. If the veins are the causative factor and they in turn are pathological, then we must seek still further the cause of the varicosed condition of the veins, which in reality would then be the true and basic causative factor in the production of varicose ulcers.

Whether this abnormal circulatory condition is primarily due to a deficiency of the venous valves according to Delbet and Mocquot, Hasebroek, Nejrotti; to the loss of the nervous and muscular tone of the venous wall, Kashimura; to primary weakness of the connective tissue associated with other varices of the body as varicocele, flat feet, enteroptosis, etc., according to Bier and Von Meisen; to primary weakness of the vein wall locally, Ledderhose; to congenital weakness of the veins, Schambacher; to a luetic basis in many cases, Zinser and Philipp; to endocrine disturbance according to Sicard, Mabille, and Nichols; to angiosclerosis and phlebosclerosis similar to that of arteriosclerosis, Bregman; or to the theory of an infection and inflammation in the vein wall, we are not convinced.

Personally, I believe the great weight of evidence is in favor of the latter. This is supported by such men as Fischer, Konatski, Thorel, Nobl, Hesse and Schaak, Janni, Marullaz, and Renzi. The latter, with his investigation among Italians afflicted with pellagra, and Zessas with his report on the association with the infections of rheumatism, scarlet fever, pneumonia, influenza, enteritis, etc., lend great evidence to the theory of infections plus a chemo-toxic effect on the muscle of the vein wall as the primary etiologic factor. A thorough discussion of all these theories, however, will be left for a future report.

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Thus, I will accept, for the sake of brevity, that the varicosed condition of the vein, with the abnormal circulatory condition attendant, causes a stagnation of fluid in the tissues and thus lowers the resistance locally, due to the lack of the normal interchange of oxygen and carbon dioxide. There are many other factors which tend to aggravate this local condition of congestion. Von Meisen and others believe that they have actually demonstrated an increase in the carbon dioxide content of the blood in the veins of the leg as compared with that of the arm.

Of recent date we have the work of Adolph Hanson, of Faribault, as well as Vines, of England, and others, that deficiency of calcium metabolism associated with a hypoparathyroid activity is an important factor in the ulcer development. This will be discussed more fully under treatment.

Slide No. 1 is explanatory of this circulatory condition. Thus you can clearly see how the tissues become waterlogged and their resistance to infection lowered.

With this fertile soil developed and prepared for these ulcerations, but slight additional factors are needed to cause the final tissue breakdown and the resultant open ulcer.

This exciting cause is usually trauma in some form, or a local phlebitis. The first is often of no significance at the time; and were the local state of the tissues normal it would pass unnoticed. In fact, the trauma is more often mild than severe. The phlebitis with the secondary cellulitis and then ulceration would never occur were it not for the stagnation of blood in the veins and the saturation of the tissues with the blood serum by osmosis. Should there occur a fracture of the tibia with the above conditions present, a resultant ulceration would most certainly follow. Such an ulceration heals only with difficulty and under the most ideal conditions.

The actual ulceration often involves only the skin and tissues just beneath, giving an area very similar to a carbuncle. This is proven by the fact that as soon as the condition is brought under control the areas of regeneration are seen with the skin fast assuming a normal healthy appearance throughout. There may be areas that have ulcerated and sloughed through all the dermal layers, thus forming a true ulcer. Though these are the conditions most commonly seen, there is often found the extreme case with a large deep ulceration through all the layers of the skin showing a raw granulating base. These usually are irregular in border outline and at times almost encircle the extremity. A certain per cent of these ulcerations are luetic, but the opinion of Zinser and Philipp that most of them are on a luetic basis is refuted by Professor Nobl and most other authors on the subject. Personally, I have found only two cases with positive Wassermanns, though I have checked every case that did not respond well to the usual treatment.

The microscopic pathology is interesting but superfluous here.

The bacteriology of varicose ulcers has been studied in detail by W. Lowenfeld and reported in Wien. klin. Wchnschr., 1924. He has recorded his bacteriologic findings in all the different layers of the ulcer from a large amount of clinical material. His conclusions are that he finds no constant organism present, though the staphlylococcus is the most common. He does not believe that the type of infection has any particular relation to the formation or progress of the ulcer itself. With this conclusion I most heartily agree.

With the foregoing factors present, the actual ulcer development begins with a marked cellulitis locally, either infectious or following the trauma, and then a secondary breakdown of the tissue occurs with sloughing. Even at this stage, if radical measures are instituted the whole destructive process may be headed off and the tissues quite rapidly brough back to normal. The close and intimate association of the veins to the ulcerations has seldom been emphasized. Slides Nos. 2 to 8 explain this. Oftentimes no vein can be found except just at the edge of the ulcer. This vein may be recurrent and below the ulcer. At times, when an ulcer has healed very slowly, in spite of all care, we will ultimately locate a vein of good size running under what was originally the base and middle of the ulcer.

The two most common complications found in these conditions are eczema, which at times may be extensive and almost unbearable from the intense pruritus, and a fungous growth which usually develops throughout the area below the ulceration and in the tough skin of the ankle and foot. In two cases this has caused the tough skin of the foot to blister up in large blebs with a final denudation of at least one-half of the area of the ankle and foot.

Inasmuch as the actual basis and causative factor of the ulcerations is the varicose veins with their resultant stagnation, the first thing in treatment is to care for them and treat the ulceration entirely as of secondary importance. This is contrary to the ideas of the past, with but few exceptions.

From the number of recurrences postoperative, and the expense, pain, hospitalization, loss of work, and operative danger, I believe that the operative treatment is a method that is rapidly becoming obsolete.

The injection treatment by the use of sclerosing solutions accomplishes all that could be hoped for by operation and far more. This without loss of time, with less danger, no hospitalization, less expense, and far less chance of recurrence, due to the fluid extending laterally from the point of injection through the superficial veins, and thus obliterating far more veins than could possibly be removed. With proper technic this should leave no scars at all.

The technic of the injection is practically the same as described in my former paper, except for the refinement, developed by continued work.

I now use three different solutions, the 20 per cent sodium chloride, 60 per cent calorose, and 30 per cent or 40 per cent sodium salicylate. There are very definite indications for the use of each of these solutions, and these I try to adhere to as much as possible. The 20 per cent sodium chloride is still used for all extensive cases. The calorose of Professor Nobl, of Vienna, and introduced locally by my good friends, Drs. Moses Barron and R. C. Logefiel, is clearly preferred for the isolated varix. The sodium salicylate is used when there is no response to the other two solutions, as occasionally happens.

Regardless of what may be done elsewhere, it is the veins in their close local association that must be cared for first before much progress will be made in the cure of the ulcer. I have seen more progress in four days after this was done than was obtained in three weeks previously though the rest of the treatment remained the same throughout.

Coincident with the obliterative treatment of the veins, the supportive treatment is carried out for the extremity. This may be done by any chosen method, but the more intense and thorough it is, the more rapid the recovery. Personally, I prefer the use of the 4-inch Ace elastic bandage. This is of heavier weight than most of the woven elastic cotton bandages, and thus does not wrinkle and stretch so easily. By means of this the dressing may be changed daily or otherwise, as desired, which is not the case with any other method.

In addition to the general support for the whole leg, pressure is applied direct to the ulcerating area. This is best accomplished by a good grade of rubber bath sponge. On one case, on the first application it took four of these sponges to cover the ulcerating area, while two days later three sponges were fully sufficient. If it is a smaller ulcer the sponge may be cut so as to cover about one inch beyond the border of the ulcer area. It matters little what may be used on the ulcer in the way of ointment or antiseptic at this stage. The important thing is pressure and lots of it. In the more severe and extensive cases I put the bandage on as tight as I can wrap it and then care for the resultant pain, since these areas are very painful, with morphine, etc., as needed for the next twenty-four hours. Do not be afraid of wrapping the leg too tightly, as you cannot do so. Use the silver nitrate stick or 30 per cent to 50 per cent solution on the ulcer at first and then usually a 10 per cent application, two to three times a week. Put plenty of gauze on the ulcer to absorb the serum, then the sponges. Cover this with a layer of sheet wadding, as it is comparatively impervious to water and will keep the bandages clean and unsoiled from the drainings. Continue the pressure throughout the treatment of the ulcer.

The large deep ulcerations through all the layers of the skin heal over much more quickly by the judicious use of skin-grafts. This, however, is of no use if done before the congested condition of the leg is cared for. Once the circulation of the extremity approaches normal and the ulcer base is clean, an ideal result may be obtained by the Tiersch, Wolf or pedicle flap skin-grafts. It is very essential here, in particular, not to let the patient on his feet until the grafts have taken well and then only with a continued support, as in any of the healed cases with their extensive scar tissue formation and poor trophic state of health.

When the ulcer has healed the leg should be supported with an Unnas cast as long as necessary. This is absolutely essential if you expect to keep it healed. Depending on the amount of lymphatic and circulatory destruction present, this period of support varies from one month, in those with a moderate amount of lymphatic destruction, to the remainder of the patient's life, in the more extensive cases. In these severe cases it is strictly a trophic state of affairs as the tissues are hard, and the circulation is almost nil, due to the fibrosis following the long-continued inflammation and congestion.

In co-operation with Dr. Adolph Hanson and the Research Department of the Parke, Davis and Company, I am now trying out the use of his Paroiden in association with the calcium metabolism in these cases. No report is available as yet.

My sixty-fifth case died of a pulmonary embolus. Microscopic sections showed this to be of less than twenty-four hours duration, though the case had been treated two weeks previously. I accept this embolus as resultant from the injections, though I am *not* convinced as to its origin. This case has already been reported in the Journal of the A. M. A., August *27*, 1927, by O. A. Olson.

My 231st case died on the twenty-first day following injection. At first the cause of death was given as pulmonary embolism, which is the usual diagnosis in any case of death in the few weeks following the injection treatment. The autopsy findings, however, showed a very positive coronary sclerosis with complete occlusion of the right coronary artery and a terminal thrombosis of the same. Death in this case then was due to the coronary sclerosis and thrombosis and in no way associated with the injection treatment. Sections of the saphenous, femoral, and other veins were obtained for examination which showed the usual response and change in the vessel wall following injection with the sodium chloride. Slides Nos. 10 to 14 were taken from this case.

To date I have treated 255 patients. Of those, 59 have had ulcerating complications.

In conclusion let me state that, first, the old idea of treating the ulcer first and the veins later is absolutely wrong in principle, and this is borne out in practice; second, that surgery is contra-indicated and should not be done in the presence of these extensive ulcerating conditions; third, the injection treatment can be used with absolute safety from the very first; fourth, the rubber sponge pressure combined with the bandage support of the extremity is the most definite positive advance in the treatment of varicose ulcers in recent years.

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A CONSIDERATION OF THE RELATIONSHIP OF DISEASE TO ACCIDENT AND COMPENSATION*

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In looking carefully into the subject of the relationship of disease to accident, one is immediately struck by the lack of literature and of reliable statistics covering this phase of industrial medicine.

Certain diseases are, in and of themselves, compensible. This group includes:

1. Anthrax
2. Lead poisoning or its sequelæ
3. Mercury poisoning or its sequelæ
4. Phosphorous poisoning or its sequelæ
5. Arsenic poisoning or its sequelæ
6. Poisoning by wood alcohol
7. Poisoning by nitro-amido-derivatives of benzine (dinitrobenzol, anilin, and others) or its sequelæ
8. Poisoning by carbon bisulphide or its sequelæ

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9. Poisoning by nitrous fumes or its sequelæ
10. Poisoning by nickel carbonyl or its sequelæ
11. Dope poisoning (poisoning by tetrachlormethane or any substance used as or in conjunction with a solvent for acetate of cellulose or its sequelæ
12. Poisoning by gonioma kamassi (African box-wood) or its sequelæ
13. Chrome ulceration or its sequelæ
14. Epitheliomatous cancer or ulceration of the skin or of the corneal surface of the eye, due to tar, pitch, bitumen, mineral oil, or paraffin, or any compound, product, or residue of any of these substances
15. Glanders
16. Compressed air illness or its sequelæ
17. Ankylostomiasis
18. Miner's nystagmus
19. Subcutaneous cellulitis of the hand (beat hand)
20. Subcutaneous cellulitis over the patella (miner's beat knee)
21. Acute bursitis over the elbow (miner's beat elbow)
22. Inflammation of the synovial lining of the wrist joint and tendon sheaths
23. Cataract in glass workers

These diseases are all definitely and inherently compensible.

It is not proposed in this discussion to take up the foregoing diseases, but rather the relationship of some of the diseases which are not, in and of themselves, compensible, but which are frequently associated either as a causative factor of accident, or as factors unduly prolonging the patient's recovery from accident and consequently increasing the disability incurred. Chief among these diseases are: tuberculosis, arteriosclerosis, heart diseases, arthritis, and diabetes.

Taking up first, Tuberculosis—Publicity Campaigns backed by the medical profession and by the laity have been so widespread and so successful that patients with active tuberculosis in offices or factory work have become a rarity, and need not be further considered. However, the patient with incipient tuberculosis or the quiescent case still presents a problem. These individuals are necessarily subject to the same accidental hazards as all other and when the tuberculosis makes itself manifest, or is discovered by the physician, many attempt to lay the entire blame upon an otherwise minor accident. Two illustrative cases may be cited:

The first is that of a man employed in a leather warehouse, where he frequently handles bundles of leather weighing approximately twenty-five to thirty pounds. Apparently, he had been in good health until one day he complained after swinging one of the bundles up onto a shelf that he had a sudden pain in the right chest. Examination disclosed a definite pneumothorax of the right chest with a collapsed lung, and sputum examination revealed tubercle bacilli. There can be little doubt of the fact that in this individual tuberculosis had existed for some time, and that the strain associated with lifting the leather bundles was largely coincidental. This man, however, brought an action against the insurance company covering his employer.

A second case is that of a railroad employee who stated that he had an influenzal attack for one week, and that the day following his return to work he was struck in the left chest by a flying piece of wood. Following this he was severely ill, and examination at a later date revealed a large pleural effusion, which upon guinea pig inoculation caused definite tubercle formation. This patient died eight months later, and his estate brought suit against the railroad claiming that his illness and death were due to the accidental injury to his chest, and recovered a settlement of $4,000.00.

The fact that men prominent in the field of tuberculosis state that injury to the chest may be the cause of a reactivation of an otherwise quiescent tuberculosis must be borne in mind when we are asked for an opinion relative either to the physical desirability of an individual as an employee or in connection with chest injuries.

These cases undoubtedly represent an increased hazard, both for the employers and the insurance companies, although I have been unable to find any definite statistics covering this field.

Arteriosclerosis also frequently furnishes an additional hazard to the employer as a cause of accident. This can best be understood if we review briefly some of the symptoms of which this group complain when they need medical advice. Among them are the following: vertigo, fainting spells, loss of memory, transitory aphasias and apoplectic seizures.

Modern factory and shop practice, with its substitution of machine for hand labor, places a much greater responsibility upon the individual than was formerly the case, and necessarily makes the sudden physical failure of the individual a hazard to his fellow employee and is undoubtedly a frequent cause of accident. This fact has led to the institution of routine physical examination by most of our large employers of labor, such as the railroads, and the establishment of definite minimum standards from the physical point of view. It is of interest to know that arteriosclerosis of more than a slight degree is considered a cause for rejection by most of the larger life insurance companies.

How the individual may here again conclude that his disability is due to a minor accident may be illustrated by the case of a man of 58, who was employed by one of the concerns selling farm implements. This individual while demonstrating a tractor received a slight bruise, due to the breaking of one of the supports of the portion of the machine upon which he was sitting. He immediately repaired the same and continued his demonstration for the remainder of the afternoon. That night he had an apoplectic attack, from which he only partially recovered, as he has still a partial paralysis of the left arm and leg. His physical findings are entirely typical of an old hypertension with marked arteriosclerosis. His brachial, radial, and temporal vessels are all tortuous and palpable. The eye grounds also show tortuous vessels. The heart shows the usual hypertension type of enlargement. Nevertheless he brought suit charging that his accident was the causative factor in his apoplexy.

Chronic heart disease is closely allied to the subject of arteriosclerosis, and again we have symptoms similar to those of patients with arterial diseases especially in the incidence of sudden death or loss of consciousness. This possibility will always represent a cause for possible accident in this age of machinery.

The effect of heavy physical work upon both the arteriosclerotic and the chronic cardiac must be considered. It undoubtedly influences these cases adversely and has probably been an aggravating cause of vascular accidents in many cases.

Arthritis is another condition which frequently prolongs disability resulting from minor accidents. This is especially true where the involvement is of the spine. Many of the so-called back-strains of long duration show definite signs of inflammatory processes when *x*-ray studies are made of the affected vertebra, and there is no doubt that employers and insurance companies have paid heavily in many instances where a coincidental bruise or strain has taken place.

Diabetes has also been included in this list of diseases. It represents a hazard to the patient in either of two widely different types of cases. Many of our more severe diabetics are now taking insulin and by its use have been able to return to their former occupation. These patients are, however, always subject to sudden insulin reaction when circumstances make accurate dietary control impossible. These insulin reactions vary all the way from transitory weakness to actual loss of consciousness, and I do not think that the suddenness with which these reactions manifest themselves is well understood even by a great many of the medical profession.

It is obvious that if severe insulin reactions occur while the individual is operating any kind of machinery that an accident is almost inevitable. Nevertheless I knew of one insulin case who was working as a locomotive engineer and another who was for a time a street car motorman. Both of these patients were apparently able to do their work satisfactorily, but the possible incidence of such a reaction might cause a most serious accident, involving many individuals.

The other type of diabetic who represents a problem from the viewpoint of accidental hazard is the arteriosclerotic. These patients are, as is well known, subject to gangrene of the lower extremities, and minor foot injuries have frequently caused the development of the gangrenous condition and resulted in long disability and excessive expense and monetary award.

The following cases are illustrative of this condition and the extensive disability resulting from minor injury. The first patient was a cook in one of the restaurants who stated that he dropped a milk can on his toe. Thinking it did not amount to much he continued at his work for two or three days, when he suddenly had marked pain, and an examination showed a definite gangrene involving the great toe. This spread to the next toe, and both were eventually amputated with recovery, but necessitating a three month's disability with hospital and medical expense in addition to the compensation paid to the individual himself. It is of interest to know that within three months following his discharge from the hospital this patient developed a spontaneous gangrene of the same toes on the other foot, which spread, involving the entire leg and causing death in about two weeks.

Another case is that of a bank messenger, aged 64, who, while carrying a satchel of currency from one bank to another, sustained a minor injury to his foot and again developed a gangrenous ulcer. This patient was hospitalized for several months with recovery, but developed typical symptoms of coronary sclerosis immediately upon his return to work.

There is no question that the disability of both of these cases resulted from a chronic arteriosclerosis of many years standing, that the accidental factor was only a very minor incident, yet in both prolonged disability and excessive expense to the employer or to his insurance company was the result.

The only conclusion one may draw from a summary of these conditions is that the physical condition of the individual will always represent a factor of unknown degree in the causation of accident either to himself or to his fellow workers. This factor can probably never be entirely eliminated, but it can and should be decreased by routine periodical examinations of employees and the subsequent shifting of those who show such physical defects to some type of work where accidental hazard is minimal.

THE ANATOMY OF THE BILIARY REGION*

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The classical description of the biliary tract is so well known that little will be said here concerning it except to recapitulate its main features as attention is drawn to its development and anomalies.

The common duct opens, usually in conjunction with the main pancreatic duct, through the ampulla and papilla of Vater in the mid-portion of the dorsomedial wall of the second or vertical part of the duodenum. The fact that this duct may open, rarely, into the duodenum separately from the pancreatic duct gives rise to an interesting clinical variation of symptoms when a stone becomes lodged in its duodenal extremity. It is also of importance to note that, in about 50 per cent of cases, an accessory pancreatic duct drains the main pancreatic duct when the latter is obstructed by a biliary calculus lodged in the ampulla of Vater. The sphincter muscle of Oddi is a small bundle of circularly disposed involuntary muscle tissue fibers which encircles the duodenal extremity of the common bile duct just before the latter opens into the ampulla of Vater.

The right and left hepatic ducts from the right and left liver lobes usually join in the hilus of the liver to form the hepatic duct, and the latter, leaving the hilus, is joined by the cystic duct from the gall-bladder in the formation of the common bile duct. The common bile duct descends through the right free edge of the lesser omentum or hepatoduodenal ligament, which bounds the foramen of Winslow ventrally. In the hepatoduodenal ligament the common duct is related to the hepatic artery on the left, and the portal vein lies behind both the duct and the artery. The common bile duct is readily palpated in the hepatoduodenal ligament. Descending dorsally to the first portion of the duodenum, where it is easily palpable, the common duct continues behind and between the head of the pancreas and the upper part of the vertical portion of the duodenum to its termination at the ampulla of Vater. This third portion of the common duct is palpable only through the duodenal walls and is accompanied by a vein which drains into the portal vein.

The position of the ampulla of Vater is brought about by certain processes of embryologic development which, when understood, render the adult anatomy of this region easily comprehensible. Inasmuch as the parenchyma of the liver, the ducts, and the gall-bladder develop in the embryonic ventral mesentery from the ventral aspect of the duodenum, one might expect the common bile duct of the adult to arise from the ventral aspect of the duodenum, but this is not the case. The dorsomedial position of the bile duct opening is brought about by a double radial rotation of the embryonic duodenum, both rotations being made toward the right. The first occurs after the liver bud forms in the ventral mesentery and is accomplished through a retardation of the growth of the right duodenal wall coupled with the normal growth of the left duodenal wall. This results in the carrying of the duodenal attachment of the ventral mesentery with its enclosed common bile duct dorsally on the right side of the duodenum, and the proximal portion of this mesentery soon fuses with the right side of the duodenum giving it again a ventral attachment. The duct now passes ventrally beneath the peritoneum of the right side of duodenum to enter the ventral mesentery. The second rotation of the embryonic duodenum affects the whole diameter of the organ and is produced by the passage of the large gut toward the right ventral to it. The duodenum is shoved toward the right and dorsally, rotating about 90 degrees, and, in this position, becomes fused with the dorsal abdominal wall.

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*Presented at the Mid-Winter Meeting of the Sioux Valley Medical Association, at Sioux City, Iowa, January 24-25, 1928.

As the rotations previously described occur, the duodenum elongates caudally so that the fusion of the proximal portion of the caudal free edge of the ventral mesentery, with its enclosed common duct, is obliquely made and it is readily seen that the common bile duct must ascend dorsal to the first portion of the duodenum to enter the gastrohepatic omentum.

Congenital obliteration of the common bile duct may occur after the liver forms, and in cases where the gall-bladder is absent the common duct frequently enlarges to assume the function of a bladder, as well as that of a duct. The enlargement of the common duct is aided by the presence, within its inner coat, of numerous small epithelial diverticuli which are present in addition to small mucous glands.

Lymph nodes are found in the following places, and, when these are enlarged and indurated, they may be mistaken for gall-stones. One lies in the region of the neck of the gall-bladder, one at the junction of the cystic and hepatic ducts, and one lies dorsal to the head of the pancreas in the region of the third portion of the common bile duct.

The cystic duct, infrequently, may join the right hepatic duct, and, in these cases the common bile duct is formed by the junction of the right and left hepatic ducts, and no hepatic duct, so called, is present.

The division of the hepatic duct into right and left branches may occur lower than usual in the lesser omentum or even dorsal to the first portion of the duodenum, and it is in these cases that the cystic duct usually joins the right hepatic duct, and no hepatic duct exists. The right and left hepatic ducts may not join at all but open separately into the duodenum; this condition is spoken of as "double common bile ducts," though, in reality, no common duct exists. The right hepatic duct, when it arises from the hepatic duct in the lesser omentum, may give rise to a low branch which accompanies it to the liver. Because of the position of this branch it assumes a surgical importance.

The gall-bladder and cystic duct lie in the fissure or fossa of the gall-bladder on the inferior surface of the liver where they are usually supported by a wing of peritoneum which covers their inferior surfaces and sides. They may be, rarely, entirely surrounded by peritoneum and supported in the fissure by a short mesentery (floating gall-bladder).

The gall-bladder may be anomalously placed and may even be found related to the left lobe of the liver, or it may be on the left side of the body in cases of viscerum inversus. It may be entirely or nearly surrounded by liver substance (intrahepatic gall-bladder). It may be absent, small bilobed, hourglass-shaped, double, or may present diverticuli. The gall-bladder may present no cystic duct but open above into the duct system of the liver. The pelvis of the gall-bladder, a one-sided dilatation not infrequently seen bulging from the region of the neck of the bladder, may be large and tend to more or less surround the cystic duct or even the common bile duct to which it may be adherent.

The cystic duct is usually more than one inch in length and usually connects the gall-bladder with the beginning of the common bile duct. It usually follows a somewhat tortuous course, and a sharp angle marks its junction with the neck of the gall-bladder. The tortuosity of the cystic duct, the angle at its junction with the neck of the gall-bladder, and the spiral Heisterian valve in its lumen render the passage of a probe difficult and at least, in part, account for the frequency with which gall-stones become impacted in the neck of the gall-bladder. The cystic duct may join the hepatic duct almost at a right angle, or it may parallel the terminal portion of the hepatic duct for a distance before the junction is effected. The cystic duct may join the hepatic duct at any point in the lesser omentum, and, not infrequently, the junction is effected dorsal to the first portion of the duodenum. It may wind part way about the hepatic duct and open into any side of the latter. The cystic duct may be double even when there is present only a single gall-bladder, and it is absent when the bladder opens into the ducts in the substance of the liver.

The portal vein ascends in the right free edge of the gastrohepatic omentum dorsal to the common bile duct and hepatic artery and divides in the liver hilus into right and left branches, which accompany their respective ducts into the liver.

The hepatic artery approaches the common bile duct from the left side along the upper border of the head of the pancreas, passes through the mesentery of the first portion of the duodenum, and dorsal to the first portion of the duodenum to enter the lesser omentum. In the hepatoduodenal ligament it ascends ventral to the portal vein and to the left of the common bile duct. Just below the liver hilus it divides into right and left branches, which accompany the right and left hepatic ducts. The division usually occurs at a little lower level than that of the hepatic duct, and the right branch crosses the hepatic duct either ventrally or dorsally and gives off the cystic branch which passes ventrally usually above the cystic duct. The cystic artery divides into a superior and an inferior branch, the former being distributed to the liver and the upper surface of the gall-bladder, while the latter supplies the inferior surface of the gall-bladder. In cases where the right hepatic artery crosses dorsal to the hepatic duct, the cystic artery may arise either to the right or the left of the duct. Rarely the cystic artery arises from the superior pancreaticoduodenal artery and accompanies the common and cystic ducts to its distribution. Hemorrhage resulting from the cutting of this artery in operations on the common duct is so profuse as to cause one to think that the hepatic artery itself has been incised.

In operations for the removal of the gall-bladder, the cystic duct and artery should be carefully identified, isolated and ligated, and the gall-bladder removed from behind forward.

It is of interest to note, and probably of clinical importance, that the celiac or solar plexus and vagi nerves of the autonomic nervous system supply directly the liver with its ducts, the spleen, the pancreas, and the stomach.

PROCEEDINGS OF THE MINNESOTA ACADEMY OF MEDICINE

Meeting of February 8, 1928

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town and Country Club on Wednesday evening, February 8, 1928. Dinner was served at 7 P. M., and the meeting was called to order at 8 P. M. by the President, Dr. John E. Hynes. There were twenty-six members and one visitor present.

The minutes of the January meeting were read and approved.

The program of the evening consisted of the following case reports:

Dr. Oscar Owre (Minneapolis) reported three cases:

Case 1. *Papillary carcinoma of the kidney pelvis.*—M. H., woman, aged 75, had been treated for albuminuria the last two years. During the last six months she has had two or three attacks with blood in the urine and a dull ache and pain in the back on the right side. She had been on a rigid diet for a supposed Bright's disease. She was admitted at the Swedish Hospital for cystoscopic examination on Dec. 29, 1927. Cystoscopic examination showed a normal bladder. The right and left ureteral openings appear normal. The left ureter showed a swirl of clear urine with a good contraction. Blood appeared to dribble from the right meatus. Both ureters were catheterized. Blood could be made to flow from the right catheter only when syringed out with water. An indigo-carmine test, given intravenously, showed a hyperfunctionating kidney on the left and no color in twenty minutes from the right. A pyelogram of the right pelvis shows almost a complete filling defect of the pelvis, very much like the point of the small finger. There is a thin line of shadow-casting fluid taking the form of an irregular circle and a few traces in the inside of the circle. (*X*-ray shown and specimen displayed.) As you will see, this is a papillary carcinoma of the pelvis of the kidney. In the pelvis a large clot about the size of an indoor baseball was found. This clot was old and showed a great deal of fibrin and appears almost organized in places. The thin irregular circular film of shadow-casting fluid occupied the periphery of the clot and the inner surface of the dilated pelvis (hematonephrosis). The irregularity of the line is caused by numerous implants of the original papilloma situated in the pelvis. There was no difficulty in removing this kidney as there were no adhesions or infiltrations about it. The growth was entirely inside the pelvis. The kidney cortex was very thin and practically no secretory tissue remained.

She has made a splendid recovery; however, the prognosis in these cases is looked upon as quite unfavorable. (P. S. *X*-rays of the entire body showed no metastases.)

Case 2.—Male, 62 years of age, referred by Dr. Baker, February 8, for examination. Hematuria following exertion. The patient noticed blood in the urine two years ago. No vesical distress and no pain on either side of back. Urination was not frequent, and the patient did not have to urinate at night. He noticed, however, that at times he could pass as much as a quart of urine. The prostate felt small on rectal examination. On passing the cystoscope sixteen ounces of bloody, residual urine was removed. The bladder mucosa appears non-inflammatory. The left ureter was normal and the contractions and spurts of urine indicated a hyperfunctionating kidney. The right looked less active. There was no enlargement of the prostate intravesically. Just back of the right ureter and on the lateral wall of the fundus could be seen the orifice of a diverticulum. Bloody fluid could be seen coming from the orifice. By further distention of the bladder and altering the position of the cystoscope, it was possible to see, just inside of the orifice, some foreign matter which was not stone, but had the appearance of tumor tissue. An indigo-carmine test showed a good color in one and one-half minutes from the left, and a fair color in eight minutes from the right, ureteral opening. It is important to know that there is no communication between the ureter and the diverticulum (no blue color was seen coming from the orifice of the diverticulum); however, a shadow-casting catheter was passed to the kidney on the right side and another was coiled up in the diverticulum. An *x*-ray shows that they do not lie in contact with each other. The cystoscope was removed, leaving the bladder moderately distended. Two and one-half ounces of a 33 1/3 per cent solution of sodium iodide was injected through the ureteral catheter into the diverticulum. Some of this will naturally escape into the distending medium of the bladder, but there will be a disparity in the density or concentration of the fluid in the diverticulum and the bladder. (*X*-ray plates shown.) Here are two sacs almost of equal size with a defect in the filling of the diverticulum on the lower and lateral surface, demonstrating a tumor in the diverticulum and the source of the hematuria.

Case 3.—J. B., male, aged 36, referred by Dr. Arnold, February 8, 1928. The patient gave a history of having passed six ureteral stones on an average of once a year. This was always accompanied with a great deal of discomfort and pain principally in the region of the right kidney. A complete *x*-ray plate showed no evidence of calculi in the genitourinary tract. He was at present free from pain. The cystoscopic picture was that of a normal bladder, perhaps some redness about the right ureteral meatus. The right ureter showed very little action and a thin fluid was seen to dribble from the same. The left showed an over-active kidney. Indigo-carmine showed very promptly from the left and no color from the right in twenty-five minutes. A pyelogram of the right kidney displayed an unusual elongated renal pelvis and a hydro-ureter for a very short distance and then a very marked kink or crochet-hook ureter. The picture suggests, with little doubt, that of a kink produced by an anomalous or adventitious vessel.

DISCUSSION

Dr A. Schwyzer (St. Paul): This was indeed a very splendid clinic. In the first case, you can readily see how the affected side would only dribble, and the urine would hardly get by the enormous blood clot at all. The tumor is, of course, carcinoma. It has a very broad base; in fact it comprises half the surface of the cavity. These tumors are rare. I showed you one papillomatous carcinoma some time ago where the tumor was in the pelvis of the kidney and was about the size of an egg-yolk and had a reasonably small base. Nevertheless it was a papillary carcinoma. The diagnosis from the *x*-ray picture as Dr. Owre has developed it is simply beautiful.

In regard to the second case, the diverticulum of the bladder; its demonstration was as pretty as anything one can see in this line. First seeing the tumor in the diverticulum with the cystoscope and then showing it on the screen. It just shows what can be done if the case is in expert hands. The coiling up of the catheter in the diverticulum, and especially the injection of the strong contrast solution into the diverticulum, with its gradual permeation into the water-filled bladder, appeals to one very much. Was the right ureter in the diverticulum?

Dr. Owre: No, that was independent. We had to demonstrate that because that is an important point.

Dr. Schwyzer: I agree with Dr. Owre, in the second case, that he had to deal with a congenitally defective kidney where a plastic in the uretero-pelvic junction would not do any good.

Dr. Wm. Lerche (St. Paul): I have used the method of injecting two fluids of different densities for the roentgenographic demonstration of diverticula of the bladder. The contrivance described by me in the Annals of Surgery, Feb. 1912, (a small rubber bag tied to a ureteral catheter) is introduced into the diverticulum, by the aid of the cystoscope. A fluid of greater density than that already filling the bladder is slowly injected into the bag in the diverticulum, and as this fluid distends the bag, the fluid of lesser density present in the diverticulum is gradually forced into the bladder.

For smaller diverticula I have devised another method, by which, with the aid of a double catheter to which is attached a small sausage-shaped bag, the opening into the diverticulum can be closed and the latter filled with fluid of desired density.

Dr. Owre (in closing): In children and young adults, without severe infection, it is very important to ligate the adventitious vessel and try to conserve the kidney. In this case the kidney was so bad that I advised its removal.

As regards the removal of the diverticulum a very good plan is of course a wide exposure and then pack the cavity of the sac through the orifice with gauze until it is full. It can then be dissected out more easily.

At this time it may not be out of place to speak about the advisability of cystoscopy in cases of enlarged prostate. I believe, if the cystoscope can be easily inserted and without force or injury, it should be done. In cases of diverticula it often becomes necessary to resect them later even though the prostate has been removed. Further, we often find, associated with adenoma of the prostate, foreign bodies, stones, and papillary carcinoma of the bladder. One case of diverticulum that I recall was a man in the care of the late Dr. Ringnell. He removed a large adenomatous prostate, and after the suprapubic wound healed the patient still had 500 c.c. of foul residual urine. He was to come under my care but went to Dr. Bransford Lewis who found a large diverticulum which he removed with complete recovery. The urine was not foul before the prostatectomy, and the orifice could no doubt have been seen had he been cystoscoped. This is an argument for cystoscopy before prostatectomy. I could cite many others. Many seemingly large diverticula will drain after the prostate has been removed; others will not. It guards the prognosis if we have previously examined the bladder.

Dr. F. W. Schlutz (Minneapolis) reported the following case:

The case concerns a baby girl who was admitted to the University Hospital when she was two and one-half months old for the treatment of malnutrition and some chest condition. The birth was normal and at term. Some respiratory difficulty developed shortly after birth and was more or less continuous up to admission of the baby. This was frequently accompanied by cyanosis. Breathing was constantly rapid. There was no hyperpyrexia. In spite of regular and adequate breast-feeding, the baby showed steady decline in weight and presented considerable malnutrition and great weakness at the time of admission. An *x*-ray examination taken shortly before showed some illy defined abnormal chest condition in the form of a density or shadow involving almost the entire right lung. Atelectasis was thought of. Other pathological conditions, such as chylothorax, tuberculosis, tumor, diaphragmatic hernia, etc., were considered. Careful examination ruled out all these conditions. A thoracocentesis yielded about 50 c.c. of a limpid viscid fluid free from fat and cellular elements but with a high content of albumin. Removal of this fluid gave temporary relief. At subsequent aspirations as much as 20 c.c. of such fluid was removed. The rapid filling up of the cavity indicated a cyst not connecting with the bronchi.

X-ray pictures taken before and after injection with sodium iodide confirmed this and showed the cyst to be intrapulmonary. The constant filling of the cavity with the resulting embarrassment of respiration and disturbance of the nutrition suggested the advisability of closed, continuous drainage. This was accomplished by the use of a trochar and the usual operative procedure. Several blood transfusions were given to improve the infant's general condition.

The cavity was irrigated at first with saline solution, then with Dakin's solution, and finally with a 0.5 per cent to 1 per cent formalin solution. This procedure was carried out twice daily. After a period of about two months of this treatment the cavity had decreased considerably in size and would hold only between 5 and 8 c.c. of fluid. The child's general condition had improved remarkably. There was no respiratory difficulty, and very good gain in weight.

On account of the probable bronchogenic nature of the cyst and the possibility of the presence of other cysts connecting with the bronchi, a bronchoscopy with injection of lipiodol was considered. This procedure was carried out and, while successful, was attended by fatal consequences about forty hours after the operation. Death seemed to be due to shock and collapse.

A limited autopsy on the chest showed the presence of an intrapulmonary cyst of the lower part of the right lung, walled off by dense masses of fibrous tissue. There was considerable lipiodol in both bronchi and complete gross absence of acute pulmonary inflammation.

DISCUSSION

Dr. A. Schwyzer (St. Paul): This case is pretty difficult to diagnose. It had been five months since the first puncture was made. From the first picture it looked as though the pleura was free. It is known that we sometimes have very large dermoids, but it was not a dermoid. Apparently it was a thin-walled cyst in the beginning, containing slimy fluid. What could that be? There is one condition that comes to my mind, and that would be a cyst of the mediastinum or a thymus cyst. The thymus apart from a rudimentary anlage at the fourth bronchial pouch comes from the third bronchial pouch and from there travels down into the chest. Kuersteiner, in Bern, had made serial sections of the whole neck of new-born babies along that tract and he found little remnants of thymus along the tract and at times some little cysts. When we have a cyst behind the sternum, the thymus cyst is the most probable. A few years ago I saw one of those cysts that ran down behind the sternum. It was of considerable size. From the picture I would not say this was not a thymus cyst.

Dr. Wm. Lerche (St. Paul): I agree with Dr. Schlutz and Dr. Schwyzer that there was no indication for bronchoscopy in this case. I have not seen reported a cyst of the lung of such a size as the roentgenogram indicates in Dr. Schlutz's case, but there have been several cases of multiple cysts of the lungs reported. I would like to know if the cyst was entirely surrounded by lung tissue.

Dr. H. L. Ulrich (Minneapolis): In regard to the thymus: I think that was probably the origin of the cyst in this case.

Dr. Schlutz (closing): The thymus was found intact at autopsy in this case, but that would not necessarily mean that this cyst did not have any connection with the thymus. In my opinion, bronchogenic origin would seem more likely. Analysis of the mass has not yet been made. I have never seen a similar case. I am quite certain that the bronchoscopy was an ill advised procedure.

Dr. J. F. Hammond (St. Paul) reported two cases:

Case 1.—Miss W., aged 17, was operated on February 17, 1923. There was double pyosalpinx with tubo-ovarian abscess in the left side. The mass in the left side extended up to the brim of the pelvis. Both tubes were removed; a portion of the left ovary was resected, and a wedge-shaped piece of the uterus was removed by the Blair-Bell method. The right ovary was left intact. The patient left the hospital apparently well in about three weeks.

On July 28, 1926, the patient was re-admitted to the hospital with a nodule in the lower end of the old scar in the abdomen, which was about the size of a walnut. The mass was of a dark red color, was quite fixed and seemed to be attached deep in the abdominal wall. It was not tender. There was some serum about the edges.

The patient stated she first noticed a small nodule appearing in the scar about six months after the operation; otherwise she had been quite well. The mass enlarged very slowly and was sore during each menstrual period. Finally, for the last year there was a discharge of blood from the scar with each menstrual period. In other respects the patient was quite well.

The patient was operated on July 30, 1926. The scar with the mass was dissected out. It was found to extend through the abdominal wall and appeared to be attached to the right ovary. There were some loops of small intestine firmly adherent to the mass. A portion of the ovary was removed with the mass. There was some difficulty in closing the abdomen as the fascia was excised with the mass rather widely. The wound healed perfectly and the patient made an uneventful recovery.

The patient left the city after her last operation but reported when visiting here in August, 1927. She stated that she felt very well. She menstruates regularly every four weeks; the flow was moderate in amount and lasted three days. She had no pain. On examination the pelvis was in good condition. The stump of the uterus was well up, freely movable, and there was no tenderness.

The microscopic diagnosis was adenoma of the endometrial type. It is quite probable that this ectopic endometrial tissue can be accounted for by the excision of the top of the fundus. The endometrium may have become directly implanted in the wound or may have become implanted on the ovary and developed from there by continuity. There was no evidence of a chocolate cyst or endometriosis of the right ovary at the previous operation. In this particular case there are other possible modes of development of the endometrium, but the direct transplant is the most likely.

Case 2.—The second case was that of a woman 45 years old. She complained of a lump which was situated in the lower end of an old appendectomy scar. She had had her appendix removed twelve years before in another city. Judging from the scar, a split-muscle incision was used. She was told her appendix had ruptured on the way to the hospital and that the appendix and the right ovary, which were gangrenous, had been removed. The patient recovered without any particular difficulty. On account of some menstrual disturbance and pelvic distress, the patient was again operated on in a St. Paul hospital, on July 30, 1926. This time she was told she had a tumor the size of an orange. The record of this last operation was seen by me. A low midline incision was made and a fibroid the size of a walnut was found on the anterior surface of the uterus and was removed. The uterus was recorded as being twice its normal size.

This patient first came under my observation January 29, 1928. She stated that the lump was first noticed in September, 1927. It gradually increased in size and lately turned black and bled at times. She stated it was painful at each menstrual period. Her menstruations had been increasing in amount during the last year. She had some pelvic discomfort which also was increasing during the last year.

On examination there was a dark-colored nodule about the size of a hazel-nut in the lower right quadrant of the abdomen. It was cystic, quite indurated about the edges, with no tenderness. It was fixed. On vaginal examination the cervix was found up under the symphysis, the fundus, the size of a three-months pregnant uterus, was quite hard and irregular in outline. There was some general pelvic tenderness. Nothing special was made out in the adnexa. Otherwise the history and examinations were negative.

An operation was performed on January 30, 1928, and the abdomen was opened by a low midline incision. There were extensive adhesions in the pelvis; the uterus, which was detached from its anchorage on the left side, was adherent in the cul-de-sac. There were two or three interstitial fibrous nodules; the left tube was gone; the left ovary was bound down behind the uterus; the right adnexa was gone except a small portion of what seemed to be the ovary which was firmly adherent to the abdominal wall under the lower end of the old appendix scar. The uterus was amputated, and the left ovary removed. The old appendix scar with the nodules was dissected out with the remaining portion of the right adnexa. There were several fibroids found in the uterus, as the specimen shows.

Microscopical examination showed the nodules to be made up of endometrial tissue. The second or later operation probably had nothing to do with the development of this endometrioma. I think it is quite possible that she had a chocolate cyst in the right ovary rather than a gangrenous ovary at the time of the original operation and that this tumor developed from that source.

Dr. Arnold Schwyzer (St Paul) reported two cases:

1. A case of thrombocytopenic purpura hemorrhagica.
2. Tumor of the cerebellopontile angle (left side acusticus tumor). Operation under local anesthesia.

DISCUSSION

Dr. Schlutz (Minneapolis): I would like to ask Dr. Schwyzer whether the child showed any increase in blood platelets on the third or fourth day after the transfusion. It is reported that this change occurs in three or four days. In a recent issue of the Wiener Archiv für Innere Medizin, Hugo Krasso, of the Clinic of F. Kovács in Vienna, reports some of these cases in which he had very excellent results with repeated massive transfusions. He contends that one can get almost the same results with massive transfusions that one can get with removal of the spleen. This statement was interesting to me because it is generally believed that one must remove the spleen to be really successful.

Dr. Ulrich (Minneapolis): I want to make two comments on the first case. Personally I have never seen a case of primary thrombocytopenia in the male. I have seen it only in the female.

The second point I want to make is that there has been too much emphasis placed on the blood picture in these cases. There is also a capillary factor. Bleeding does not occur according to the law of how many thrombocytes there are in the blood. There is some other factor. We have a factor here of capillary disease which may go way back into the field of primitive reticula endothelial physiology.

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Secretary

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DISRAELI

Those of our readers who have had the pleasure of reading the biography of Disraeli by Andre' Maurois will be greatly interested in the wonderful life of Disraeli it discloses; it presents him from youth to old age, and gives a very typical picture of what he was as a young man, what opportunities he had, and his incessant attempt to further his own knowledge. He was a great reader and a great writer, and he wrote several books which have endured. He had lost nothing of his relish for the marvelous adventure of life. "He had not ceased to believe in the efficacy of action, but he wanted that to be mapped and limited. It was only in designs on a grand scale that he had lost confidence. He was that unique but pleasing phenomenon, an old romantic who was no longer duped by fanciful illusions but none the less can still delight in it, a cynic, but an ardent one. In certain respects his old age was even happier than his youth. 'In youth everything appears grave and irremediable; in old age one knows that everything arranges itself, more or less ill.' He remained inquisitive, loving to surround himself with new faces, and going to many pains to attract the young intellectuals toward the Conservative party. 'A party is lost,' he used to say, 'if it has not a constant reinforcement of young and energetic men.' "

Disraeli lived to be seventy-seven years old. "The pursuit of power had lost its attraction for him; he had no further thought of it: 'I have known in my life, something of what action is,—it is a life of false hopes and wasted energies.' If he let his spirit glean the field of memory, he could garner a rich harvest of lessons in modesty. He had seen the Whigs in a frenzy to pass a Reform Bill, the first effect of which had been to keep them out of power, and the Tories hailing as a triumph the extension of this detested Reform. He had seen Peel emancipate the Catholics after bringing Canning to ruin, Disraeli drop protection after overturning Peel; and now he beheld Gladstone in the act of threatening Russia, after heaping maledictions upon Beaconsfield. He had seen the mob acclaim Wellington and then boo him; acclaiming, booing, then again adoring Gladstone. He had seen the most pacific of minsters adopt the most bellicose of politics, and the most Germanophile of Queens take delight in thwarting Bismarck. And what, in fifty years, would be the consequences of his own Berlin policy? In his own heart he was well aware that Germany and Austria had been the true victors.

"For his own part, he had remained astonishingly faithful to his ideas of youth, and his programme of 1880 might well have been signed by Coningsby. But whereas in Coningsby's day he believed in the almost boundless potency of an individual genius, he now recognized the immense strength of the outer world. Not that he was discouraged, or discouraging either, but he was modest, infinitely modest. Under the leafy shades of Deepdene, Smythe and Manners and Dizzy had thought that a great man, supported by the Church and the young nobility, could refashion England. In old age Beaconsfield saw in the Church first and foremost a body of jealous dignitaries, of seekers after bishoprics, of rival sects, and if he had found friends among the young nobility, he had never found there that great school of natural leaders of the race, as he had so lovingly depicted them. His desire had been to give a whole nation an intellectual and romantic idea; he had failed. And he had failed precisely because he was an aristocrat of the spirit, whereas the character of England is essentially that of its middle classes."

All this quotation from Disraeli sounds like the present attitude of political bodies to-day. Evidently Parliament and our own Congress have gone through the same stages of development or maldevelopment. They harbor great ideas when they are young and expect the whole world to topple over to their side. But somehow some of the elders furnish the poise, the discretion, the direction, and the adjustment of the affairs of the nation. We get about as little or as much out of our political intrigues as the English did under Disraeli and other Prime Ministers. The world is in a state of evolution continuously and when it comes to a finality there is very little difference between the olden times and the present times except in methods of expression. What are we going to do about it? Accept it as it comes, guard it as much as possible, and hold it as thoroughly to light as is wise. But the inevitable will come to pass. We rise and we fall, we are young and we are old; but somehow we have gained something in all of our experience and in many instances the older man's counsel has been found to be full of wisdom and suggestions even if for a time they upset the supposedly normal status of a nation or a people.

There is really nothing new except the new inventions. Science has advanced progressively, even though much of it is a repetition of what happened in very early years. Yet we are all ready to look forward to something wonderful. We who have lived in our day within two or three decades have seen many changes, we think, but we do not know until the final outcome; then everything may be reversed, or everything may turn out to be the revolution or evolution of an old idea.

The book itself is well worth reading and is full of the many ideas of the young and the old.

THE A. M. A. AT MINNEAPOLIS

Minneapolis is looking forward with great pleasure and joy to the approach of the American Medical Association meeting. The committees have been hard at work and although it may seem a graceless lot of work for so many men, each man has his place as a committeeman, whether he is a chairman or an associate. So it has been decided that some of the committees, headed by various names, are really hosts to the American Medical Association, that is, they are to welcome in every way possible the large membership expected to be present. It will be the duty of the hosts to be at specified places at specified times, or to watch over the meeting-places and see that they are properly housed and guarded by courtesy, and friendship, and that every effort is made to give the visiting men something they will carry home with them pleasurably. For instance, the committee on information is so organized that there will be advisers in every possible place, at the railroad stations, hotels, and section meeting-places (of which there are sixteen), with someone to inform the chairman, the secretary, and the section members about anything they want to know.

It has been conceded that when the various members of the American Medical Association meet a doctor who is acting as one of the hosts he will recognize him by some insignia, a button or a badge, which will tell them whether they can get the information they so actively desire. It is to be hoped that any doctor, of whatever committee he may be a member, will never refuse or ignore any man who comes to him for information; whether he has it or not, he will see to it that the information is given or find some other man who will give the visitor what he desires.

Cards will be furnished at the various hotels and railroad stations, legibly printed we hope, so that if the visitor misses an informant he will find the card and know where to go for his information. Usually the first thing a man will want to know about is a hotel and even that information will be given him, and undoubtedly he will be told where he is to be placed, in what hotel he has a reservation, and be directed thereto by any man with a badge. There may seem to be some confusion about hotel reservations but that is something that occurs always at every meeting of this size. But we believe that the committeemen have ironed out most of their difficulties and are able to provide reservations for the visiting members. We have numerous hotels, amply able to provide for the crowd,—even though some members may be housed in Saint Paul, they will certainly be taken care of properly. There is to be no increase in the hotel rates. And those of us who have attended a meeting of the American Medical Association elsewhere will remember that we have often been lined up waiting our turn to register at the hotels, and even then the confusion which was thought to be there has disappeared.

We are able to furnish a yellow-cab service at a nominal rate within a restricted area, which will include all the hotels, stations, and a sufficiently wide area about them. Then, too, there will be busses and street cars and probably a number of private automobiles provided for transportation service.

Above all, what the committee desires particularly is to have the registration at the Auditorium, the headquarters of the Association, well understood and well organized. To that end we think we have sufficient men to make this a much more simple affair than is usually found. As has been said before, there will be no hotel headquarters. The Association Headquarters will be at the Auditorium. And if our friendly visitors will only give us as much aid as they can, we have no hesitancy in saying we can provide for them.

We are unable at this time to give a full quota of the committees and their membership. That will be published in the next number of The Journal-Lancet and will also be found in the *Journal of the American Medical Association* for May twelfth, which will contain the Convention news, illustrated maps, and meeting-places, as well as the official program. So the men who study the May twelfth issue of the Journal of the A. M. A. ought to be fully enlightened as to what is to be done and what will be done at the coming meeting.

CHOICE BITS FROM A DEPARTMENT OF VITAL STATISTICS

The Journal-Lancet will undertake to publish a few choice letters that have been received by the Minnesota State Board of Health in the Department of Vital Statistics which will be sort of a follow-up to what Mrs. Pierson has already said in our May first issue.

These letters are from two very honest men, one of them, fortunately, still living, and the other a man who was formerly a member of the State Board of Health and who lived in Stillwater,—Dr. B. J. Merrill, who has now been dead for some years. These letters from Dr. Merrill, which we are publishing at this time, were written from Stillwater, and they show the friendly controversy that is raised, at least between friends, in and out of the Department of Health. The names of the deceased are omitted, but the letters are self-explanatory; and we have no doubt that many a medical man has been troubled in his mind about how he should fill out a death certificate, and to those men we appeal, asking their support, their sense of justice, and an appreciation of the difficulties which they themselves must encounter. How many of us have been guilty of giving an insufficient return on a death certificate. Very few can hold up their hands and claim to be innocent. Fortunately, a few men in the state have been able to propagate their views even though they have not always been satisfactory to the Department of Vital Statistics!

The two letters printed below refer to the difficulties we have in accounting for the old-age problem. No one likes to say it, no one likes to use it, and it can be cloaked in a little better form of expression, at least, hence these letters are presented for your consideration:

Stillwater, Minn., March 30, 1917.

"H. M. Bracken, M.D.,
Secretary, Minnesota State Board of Health,
St. Paul, Minnesota.

"My dear Doctor:

"This is a 'voluntary flow of things' relative to the deceased ...., who went to pieces after the classic form of the wonderful 'One Hoss Shay.'

"Now I would suggest that Minnesota once more take the front and give to the priests of the Census Bureau an appropriate appellation for the end of the Autumn of life—when there has accumulated a fund of physiological arrears that overbalances the constructive processes. This to help out the poor doctor who is unable to classify the cause of death, through ignorance or otherwise. I notice that the vision of a 'Natural Death' is much argued and theorized by the Academicians, so that it is not strange that a medical doctor may go astray.

"I am afraid that I am the original source of infection in the Stillwater district, for I have used the term Retrograde Metamorphosis in appropriate cases for 35 years. At least give me credit for a small following. You know the great are oftentimes not recognized until retrograde metamorphosis has overtaken them.

"Shakespeare, one of our early biologists, said,

'And so, from hour to hour, we ripe and ripe.
And then, from hour to hour, we rot and rot,
And thereby hangs a tale.'

"But the tale is not yet coherent and unfolded. Good English however—rot and rot—retrograde metamorphosis.

"Another old time biologist—Bigle, Ecclesiastes XII—

"'The mind and senses begin to be darkened, the winter of life approaches with its clouds and storms; the arms—the protectors of the bodily house—tremble, the strong legs bow, the grinders cease because they are few, the apples of the eye are darkened, the jaws munch with only a dull sound, the old man is nervously weak and startled even by a bird chirping, he is afraid of even hillocks, his falling hair is white as the strewn almond blossoms, he drags himself along with difficulty, he has no more appetite, he seeks only for his home of rest, which he finds when the silver cord is loosed or the golden bowl broken.' "Katabolism to the vita minima of senescence (Modern translation). Then the parting of the way—the transfer of the human soul to the world's soul of after life or immortality.

"Now, if Retrograde Metamorphosis is non persona grata to the Census Bureau, try them on the above, 'Katabolism to the vita minima of senescence.'

"As a last wail I would offer—Senile Involution, a developmental or physiological decay. If the Census Bureau refuses to respond with a smile, refer it to President Wilson. Dr. Grayson was promoted for less than this.

"I think that................................ ..soul rests in peace. I cannot do more for him. The nearest we can get to the Census Bureau is Senile Involution or—Retrograde Metamorphosis. I could do little for him in life, so I am doubly sorry that I cannot label him properly in death.

"As to the term Metamorphosis, you will find it given in Gould's Medical Dictionary, Edition of 1894. 'A term denoting structural changes in form which all organisms undergo during their development from the embryonic to the adult stage;' 'In pathology, a degeneration.' The word comes from Greek words meaning across and to change. The retrograde change comes after the acme of progressive change and adultism—resulting in a 'Natural Death.'

"You can put him under 'old age,' but I cannot name the disease. It would be simply guess work without accuracy, and would be of no value. Why not say 'Unknown?'

"Or suggest to Cressy L. Wilbur, M.D., some of the above classy handles and ask him to adopt one or more of them in the international list of causes of death. To my mind they represent in a scientific manner some modes of death that dissolve the human organism, as well as animals and plants."

Stillwater, Minn., April 8, 1917.

"H. M. Bracken, M.D.,
St. Paul, Minn.

"My dear Doctor:

"In reply to yours of April 12. I do not like to have him labeled with the cold appellation of 'Old Age.'

"In browsing around in literature, terrestrial and celestial, I ran across the chapter of Physiology in Mrs. Mary Baker Eddy's Science on Health and Key to the Hereafter. Mrs. Eddy's following is no joke—and politically deserves consideration.

"I found the following—'Chemicalization' defined as follows—'The process which mortal mind and body undergo, the change of belief from a material to a spiritual basis.' In the vernacular 'Passing on.'

"I do not pretend to understand Mrs. Eddy's Physiology or Theology. In fact, I do not believe that any one, outside the denizens of such State Hospitals as at St. Peter and Rochester, can have a clear insight into it. Yet the term appeals to me—'Chemicalization.' The 'Passing on' of the poor man—now in 'no man's Land.' It is a good sweet morsel of a name. Makes one think of the Conservation of Energy and Correlation of Forces; that there may be something in the theory of eternal fires with the smell of brimstone in the Hereafter.

"I would respectfully submit 'Chemicalization' to Dr. Cressy L. Wilbur. If he should balk, refer it to Col. House."

With best regards,

....

NEWS ITEMS

Dr. C. L. Olson has returned from California and resumed his practice at McIntosh, S. D.

Dr. H. A. Davis, of Dickinson, N. D., has retired from practice, and is leaving the state.

The new St. Luke's Hospital building at Aberdeen, S. D., will be ready for occupancy about June 1st.

Dr. N. C. Hunt, of Fairmont, who has returned from a winter vacation in California, says he encountered snow-drifts near home greater than he had ever seen before in the forty-five years he has practiced in Minnesota.

The business men of Butte, Mont., have taken up the matter of building a million-dollar memorial hospital, the funds to be supplied by public donation. The present hospitals in the city would be merged in the new one.

Dr. R. C. Warne, of Mitchell, S. D., died last month at the age of 64. Dr. Warne was a graduate of Rush Medical College, class of '87. He was the City Health Officer of Mitchell for several years and was in the Spanish American War.

At the annual meeting of the Staff of Fairview Hospital of Minneapolis held last month, the following officers were elected: President, Dr. Ivar Sivertsen; vice-president, Dr. Looe Baker; secretary-treasurer, Dr. A. W. Dahlstrom.

Dr. William H. Allen, a retired pioneer physician of Joliet, Mont., died last month at the age of 72. Dr. Allen was a graduate of the School of Medicine of the University of Buffalo, N. Y., class of '80, and had practiced in Montana many years.

Dr. Charles W. Bishop, of Minneapolis, died last month at the age of 54. Dr. Bishop was a graduate of the McGill University Medical School, class of '95, and came to Minneapolis soon after graduation. He was an eye, ear, nose, and throat specialist.

Miss Lydia A. Miller, a registered nurse who graduated from the Asbury Hospital of Minneapolis in 1915, has been elected Superintendent of the New Asbury Hospital to succeed the late Mrs. Knight, founder and superintendent of the Hospital for thirty-six years.

Dr. Louis Dunn, of Minneapolis, died on April 20, at the age af 62. Dr. Dunn was a graduate of the Medical College of Ohio at Cincinnati, class of '87. He came to Minneapolis in 1903, and had practiced here for twenty-five years at the date of his death. Dr. Dunn studied at Johns Hopkins and in Philadelphia after his graduation and specialized in surgery.

As this issue of THE JOURNAL-LANCET goes to press the Minnesota State Medical Association is holding in St. Paul a special meeting of delegates from the County Societies to consider the relations of the medical profession to the public and also the subject of public health. Other topics will be reported upon by special committees.

As we close this issue for the press word reaches us of the sudden death of one of North Dakota's most distinguished physicians, Dr. Francis R. Smyth, of Bismarck, at the age of 76. He had practiced in Glasgow, London, aboard a whaling vessel in the North Seas, and on the prairies of North Dakota. He won distinction wherever he was located. Further notice of Dr. Smyth's life will appear in our next issue.

The Minneapolis League for the Hard of Hearing, along with thirty-two other organizations of the kind, is observing the second annual National Hearing Week in a convention held at 1641 Hennepin Avenue (Pence Building), where many interesting talks and demonstrations can be heard and seen. All physicians will be interested in this altruistic work, which is one of the big steps in modern preventive medicine.

The amateur and professional (medical) golfers of American and foreign countries may be assured that the links of the Twin Cities will be opened to them somewhat widely during the June meeting of the A. M. A., but the committees with these momentous things in charge hope the enthusiasts will not overlook the fact that all out-of-doors would not be big enough to accommodate all of this class at one time. Please do not crowd too hard to get on the links all at once.

The Publicity Committee of the Hennepin County Medical Society has arranged a weekly course of six lectures on the art of public speaking. Professor Frank M. Rarig, head of the Public Speaking Department at the University of Minnesota, is to meet with the group once a week for six weeks. Part of the time each period will be devoted to a discussion by Prof. Rarig of the fundamentals of public speaking, and the balance of the time to the presentation of talks by members of the class.

The North Dakota Academy of Ophthalmology and Otolaryngology will meet for its tenth annual session, at 10:00 o'clock A. M., on Wednesday, May 23, in the Civic and Commerce room of the City Hall, Devils Lake. This meeting will be under the presidency of Dr. Rolf Tainter, of Fargo. Dr. Chas. E. Conner, of St. Paul, will present an illustrated paper on "Otitic Thrombophlebitis," which subject will then be open to general discussion. Luncheon will be served and the business meeting conducted at the Cafe Marguerite, at noon.

Tentative Program of the 1928 Annual Meeting of the North Dakota State Medical Association

The North Dakota State Medical Association will hold its 1928 meeting at Devils Lake, N. D., on Wednesday and Thursday, May 23 and 24. The names of the speakers, and their subjects as far as obtained at this date, are as follows:

"Leprosy, with a short discussion of an acount of an interesting visit to the world's largest Leprosarium of Coulin, Phillipine Islands." Illustrated with lantern slides. By Chas. W. Lovewell, of the Phillipine Islands.

"Toxemias of Pregnancy." By Dr. Frederick L. Adair, Minneapolis, Minn.

"Organic Heart Disease." By Dr. M. A. Mortinson, Battle Creek, Mich.

"Functional Heart Disease." By Dr. E. L. Tuohy, Duluth, Minn.

"Treatment of Heart Disease." By Dr. S. Marx White, Minneapolis, Minn.

"Local Anesthesia." By Dr. S. R. Maxeiner, Minneapolis, Minn.

"Surgical Aspects of Goiter." By Dr. Arnold S. Jackson, Madison, Wis.

"Medical Aspects of Goiter."

"Subject not yet announced." By Dr. Walter R. Ramsey, St. Paul, Minn.

"Diagnosis of the Various Forms of Bladder-Neck Obstruction." By Dr. Frederick E. B. Foley, St. Paul, Minn.

"Pathology of Thoracic Suppuration." By Dr. Wm. A. O'Brien, Minneapolis, Minn.

"Diagnosis." By Dr. E. W. Wittich, Minneapolis, Minn.

"Treatment." By Dr. King.

"Subject not announced." Sir Henry Gray.

"Subject not announced." Dr. Wallace H. Cole, St. Paul.

"Neurosyphilis." By Dr. George Neil Rhuberg.

"Gynecology." By Dr. J. D. McQueen, Winnipeg, Manitoba.

"Lacerations of the Perineum." By Dr. L. G. Rowntree, Mayo Clinic, Rochester, Minn.

Annual Banquet of Lymanhurst Medical Staff of Minneapolis

The annual dinner meeting of the Lymanhurst Medical Staff held on March 28, 1928, at the Nicollet Hotel maintained the high standerd set by the preceding one in the interest and attendance of members of the medical profession and laity.

The outstanding feature of the meeting under the direction of Dr. F. H. Harrington was the honor paid to Dr. H. Longstreet Taylor, President of the National Association, for his splendid work as a pioneer and leader in the anti-tuberculosis campaign in the Northwest and in the nation.

The main addresses were by Dr. Louis B. Wilson, of Rochester, Minnesota, and Dr. W. A. Evans, of Chicago. Both speakers had the happy facility of holding the attention of a mixed audience. Dr. Wilson emphasized the value of the physician to the community, the physician's duty to the latter, and the waste to the public if the profession was not given a leading part in various phases of community life.

Dr. W. A. Evans, among other points, very skillfully and ingeniously recounted the value to the individual and community of tuberculosis in so far as the combat with that disease stimulated better individual and community health habits.

MISCELLANY

DR. G. R. ALBERTSON, OF VERMILLION, SOUTH DAKOTA, APPOINTED DEAN OF THE MEDICAL SCHOOL OF THE UNIVERSITY OF SOUTH DAKOTA

[This appreciation of Dr. Albertson, reached us after Dr. Albertson's paper on another page was in our forms.—Mr. Editor.]

Dr. G. R. Albertson received his M. D. degree at the University of Iowa in 1910, and for two years taught in the department of Anatomy in that institution where, in 1912, he received an M. S. degree in Anatomy.

In the spring of 1912 he was appointed to the chair of Anatomy in the School of Medicine of the University of South Dakota, which position he still holds. Upon the death of Dean C. P. Lommen, in the summer of 1926, he was appointed Acting Dean and was this spring, 1928, named Dean of the School of Medicine of the University of South Dakota.

Dr. G. R. Albertson's training, association, and acquaintance with the needs of our State, during the past sixteen years, makes his services as Dean of inestimable value.

It is gratifying to note that the School of Medicine of the University of South Dakota is continuing the good work and reputation that it enjoyed under the supervision of its former Dean and that, with the entrance in the fall of 1927 of the largest class that the institution has had, the prospect looks bright for the future of the School of Medicine.

J. F. D. Cook, M. D.
Secretary, South Dakota State Medical Association.

Substitute Work or Location Wanted

An experienced physician is available at once to do substitute work. Address 456, care of this office.

Practice for Sale

North Dakota practice for sale. Annual cash income $12,000. For sale by administrator. Address 473, care of this office.

Position Wanted by Laboratory Technician

Can do all work required of a technician in hospital or clinic, except Wassermanns. Highest testimonial given. Address 471, care of this office.

Specialist Wanted

A young eye, ear, nose, and throat man, preferably a Scandinavian, by a small group of Twin City men. Salary at start, leading to partnership. Address 469, care of this office.

Locum Tenens

A young physician wanted to do locum tenens work in a hospital, in Minnesota, for a few months. Position may become permanent. Address 474, care of this office.

Eye, Ear, Nose, and Throat Specialist Wanted

A German-speaking eye, ear, nose, and throat specialist to head Department in a North Dakota Clinic. Nothing to invest and with unlimited possibilties. Excellent opportunity for good young man. Address 472, care of this office.

Practice for Sale

Fine opening for a doctor in a North Dakota town of 1800 people. Large well-settled territory, only one other doctor. A $9,000 practice. Collections 90 per cent. Nothing to sell but office equipment. Ill health reason for selling. Address 468, care of this office.

Opening in Minnesota for Young Man

Have fine location for young Scandinavian or German physician and surgeon either as assistant or partner. Might even sell out as age begins to weigh on me. Have unusually well equipped offices and a small hospital with modern equipment in connection with offices. Address 475, care of this office.

For Rent

Will rent modern residence, (furnished), medical library with fully equipped office, also drugs, $30.00 monthly. One year lease. Beautifully located in railroad town one hour's ride from Twin Cities. Practice just right. Must pay wholesale for drugs, keeping perpetual invoice. References, only responsible parties need apply. Address 470, care of this office.

Office Space for Rent in Central District of Minneapolis

Two beautiful rooms and reception room in common with a group of physicians. Access to *x*-ray and clinical laboratories and metabolism apparatus. Free parking space for doctors' and patients' automobiles. Fifty dollars a month, or on a percentage of income. Address 466, care of this office.

For Sale

Fully equipped, well-located office. Exceptional opportunity for some doctor. Town 7,500; hospital connections; Victor *X*-ray machine; Acme Diathermy; Burdick Quartz Light, water and air cooled. Complete genothalmic optical unit. Wish to dispose of at once. Doctor deceased. Terms to suit. Write for further particulars. Mrs. P. C. Davison, Willmar, Minn.

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THE EARLY HISTORY OF THE AMERICAN MEDICAL ASSOCIATION*

BY OLGA S. HANSEN, M.D.
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MINNEAPOLIS, MINNESOTA

To the casual observer the American Medical Association is an established part of our medical world, and always has been, but, if curiosity prompts one to delve into the old transactions, the fact soon comes out that it has not always been as it is now. Less than a century ago it had not even entered the dreams of the medical profession. The history of any epoch or movement consists of two parts; what it is now, and how it came to this stage of development.

The first part may be sketched briefly by means of a diagram of the present structure with which you are no doubt familiar.

AMERICAN MEDICAL ASSOCIATION

HOUSE OF DELEGATES=175

For legislation and business.
Delegates from:

1. Constituent Associations (State and Territorial)
2. Sections of Scientific Assembly
3. Army, Navy and Public Health Service

Elects:

President
President-Elect
Vice-President
Secretary
Treasurer
Speaker
Vice-Speaker
Trustee

SCIENTIFIC ASSEMBLY SECTIONS

1. Practice of Medicine
2. Surgery, General and Abdominal
3. Obstetrics, Gynecology, and Abdominal Surgery
4. Ophthalmology
5. Laryngology, Otology, and Rinology
6. Diseases of Children
7. Pharmacology and Therapeutics
8. Pathology and Physiology
9. Nervous and Mental Diseases
10. Dermatology and Syphilology
11 Preventive and Industrial Medicine and Public Health
12. Urology
13. Orthopedic Surgery
14. Gastro-enterology and Proctology
15. Radiology
16. Miscellaneous Topics

History is a glacier. Material accumulates and forces gather for generations, at first slowly, then more rapidly. All is poised in equilibrium, waiting for a boulder or an avalanche to start it in motion. Medical forces and conditions were accumulating almost imperceptibly in the colonial period of the United States and then more rapidly in the early years of the nation. Only the push of a dynamic force was needed to overcome its inertia and to start the medical movement which has gradually increased and spread until it has become the most powerful medical organization in the world.

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*Presented before the Hennepin County Medical Society.

In 1817 Nathan Smith Davis was born. In 1837 he entered medical practice. Seven years later he gave the first conscious push to the medical educational movement, and in 1847 the American Medical Association was formed.

What was America eighty-one years ago? Only the eastern third was settled or civilized. James K. Polk was President. The Mexican War was in progress (1846-1848), implying the reach for territory in the Southwest. The railroads were spreading rapidly southward and westward, making possible the settlement of the Middle States. Chicago was ten years old. A few log huts stood where the post-office of St. Anthony was to appear a year later, from which Minneapolis was to develop. It was not until two years later that the Territory of Minnesota first emerged from the forest, when the "Forty-Niners" were streaming westward for their share of the California gold. Elias Howe's sewing machine had just been patented (1846), and the wide-skirted ladies of the Godey's Book were the ideals of female form and fashion. Morton had obtained ether anesthesia in 1846, and "The Contagiousness of Childbed Fever" had been published by Holmes in 1843.

In this American world of the 1840's there was a large and increasing number of medical schools in active competition with each other. Between 1830 and 1845 the number nearly doubled. The more students enrolled in a school, the better the income for its president and faculty. The school granting a diploma in return for the least expenditure of time and money drew the largest number of students. Two courses of lectures, preceded or interrupted by variable periods of unsupervised work as apprentice to a practitioner, were commonly required. Sixteen weeks to a course was usual, although in many schools only thirteen weeks were given, for it was said that so many of the students began a week late and left two weeks early that the professors might as well save themselves trouble and plan a session of thirteen weeks only. The same lectures were repeated year after year, so that the only advantage of taking them twice was to get the points missed the first time, either through inattention or absence. At the end of this second course of lectures the student was conducted to a mysterious green room where his professors tested him with questions which they were sure he could answer. A medical school must live up to its reputation of teaching so well that all of its student passed, received their degrees, and became by that token practitioners of medicine. Their satisfaction might well bring in a new crop of recruits to the alma mater. A few colleges and some doctors had awakened to the weakness of the system, and, in 1835 and again in 1839, attempts were made to call meetings of delegates from the medical schools and from the medical profession into national conventions, but without response.

In 1837, at the age of twenty, Nathan Smith Davis was graduated from an obscure medical college in a small city of western New York (College of Physicians and Surgeons of the Western District of New York, at Fairfield). He had been raised in a log cabin on a modest farm, and had with difficulty been spared from the farm work and by sacrifice been enabled to attend a backwoods school and a little seminary in a neighboring town. Instead of accepting the ready-made courses dealt out in the local medical school, he had organized his own schedule of lectures, so as to obtain some degree of sequence in his work. He had served under two different preceptors, had taken three courses of lectures instead of the usual two, and had given early evidence of his future activities as educator, reformer, and organizer. A picture of him taken a few years later shows a spare, clear-cut face, with keen, earnest eyes, a severe mouth and a determined, economical chin, fringed from ear to ear by a ruff of short beard. A portrait of him in 1904 at the age of eighty-seven, shortly before his death, showed no essential change. The spirit, the determination, the sureness of direction and purpose appeared undimmed. Only the hair and jugular fringe had grown white, but scarcely less abundant.

For over sixty years Nathan Smith Davis worked for the highest ideals in medical education, organization, and journalism. He joined the faculty of Rush Medical College, in Chicago in 1849, and in order to work out his own educational ideas, later founded the Chicago Medical College, of which he was dean for over forty years. His name appears among the founders of the Illinois State and the Chicago Medical Societies, Mercy Hospital, Chicago Academy of Sciences, and Northwestern University. He edited several medical journals, including the *Journal of the American Medical Association* during the first six years of its existence. He was at one time president of the International Medical Congress, and in 1864-1865 was president of the American Medical Association. In 1874 a medal with a likeness of Nathan Smith Davis on one side was presented to each new member of the Association. In 1904 he died at the age of eighty-seven, having lived a life of remarkable moral enthusiasm and intellectual industry. He knew what he wanted and persisted until it was accomplished.

A dozen or more important organizations and reforms had arisen and grown strong under his paternal care. The American Medical Association was his first-born and perhaps the most important in reach of influence. His published history of its early years has provided most significant material and has been quoted freely in this résumé. When this eager young doctor was made a county delegate to the New York State Medical Society, in 1844, he presented resolutions looking toward the reform of medical education.

Higher standards demanded:

1. A longer annual course of instruction. (Six months of the year, instead of four, was suggested.)
2. Sequence and grading in the curriculum.
3. Separation of the licensing power from the teaching function.
4. Fair standards of preliminary education.

Discussion brought out the fact that the medical colleges were resentful of any attempt at regulation, and each one feared to raise its own standards lest some other college in some other state offer a more attractive bargain to the prospective student.

In order to continue the discussion to some practical end and to bring in all the schools, it was decided to call a national convention, and Dr. Davis was made chairman of the committee on arrangements. The scheme was considered "impractical, if not Utopian," by some of the older men, but notices were sent out to colleges, societies, and prominent individuals, inviting them to meet at the college edifice of the New York University.

The colleges in Boston and Philadelphia were jealous of the prestige that the New York University was acquiring by having a meeting called at its edifice, and they refused to attend. The others accepted the invitation out of fear, for they were all resentful of the fact that the medical colleges had been criticized by a society of practitioners, and apprehensive of any action that might be taken if they were not represented at the meeting.

To justify the medical schools and to forestall the criticisms that were expected at the convention, in May, 1846, Professor Paine of the New York University delivered an address to the graduating class in March, entitled, "A Defense of the Medical Profession of the United States." He accused the members of the State Society of slandering and defaming the profession, of exerting a malign influence over the state legislature, of showing an "aristocratic feature of the worst omen," and of "exercising an oppression toward the poor for the sake of crippling the medical colleges."

Learning from this address that the proposed convention was not a publicity measure for the benefit of the New York University, other colleges, including those of Pennsylvania, previously hostile, sent delegates, and many medical societies, especially those at some distance from the place of meeting, planned to be represented.

Accordingly, on May 5, 1846, the first National Medical Convention met at the New York University and elected Dr. Jonathan Knight, of Yale, to the presidency.

Before any business had been accomplished, two professors from the New York University, apparently imbued with the same fear of danger from the new organization that had inspired Professor Paine's address to the graduating class a few months earlier, moved the adjournment of the Convention, while acting as host to it, taking the members by surprise, but they were voted down overwhelmingly. There was indignation and talk of withdrawing from the college edifice, but the apologies and explanations of the offending professors were profuse, and the session continued the making and discussing of resolutions, all of which were referred to committees to be reported back at the next meeting, called in Philadelphia the following year.

The National Convention, composed of nearly 250 delegates, met at Philadelphia on May 5, 1847, resolved itself into the first session of the American Medical Association and proceeded to make resolutions and adopt committee reports. In three days the work of the society was outlined which was to occupy the next fifty years. Registration of births, marriages, and deaths was advocated. Standards in medical education and licensure were set up. The code of ethics was established. A constitution was adopted which was democratic and representative in form and which encouraged the formation of state and county societies. Committees were appointed in the several branches to "insure the cultivation of medical science and literature." During the next half century the transactions were filled with names of famous physicians. Many minor battles were fought, but the major matter of the improvement of medical ideals was never closed.

In 1848 the college authorities opposed the very modest requirements in preliminary education suggested and the extension of the lecture term to six months, because such standards would "impose unnecessary burdens on the student and deter many from studying the profession." In general, the practitioners favored anything that made it more difficult for the medical graduates to multiply. One of the most ardent advocates for lengthening the medical course pointed out the fact that although the sum total of medical knowledge, including the applications of the microscope and organic chemistry, had enormously increased between 1800 and 1850, as evidenced by the increase in text-books and medical literature, the medical schools were "attempting to teach the medical science of 1850 in the same number of weeks as they did in 1800." The recommendations of this new association had called forth an extension of the lecture term to six month in the University of Pennsylvania and to five months in the College of Physicians and Surgeons, New York, while most of the other colleges had added from two to four weeks of preliminary instruction upon which attendance was optional.

The venerable Nathaniel Chapman was elected first president of the American Medical Association, not because he had been active in its origin, but because he was "one of the oldest and most eminent teachers in the Union and stood at the head of the whole profession." Evidently, he was not so enthusiastic about the turn that medical events had taken, for in his presidential address he observed in elegant phrases that "the profession to which we belong, once venerated . . . . has become corrupt and degenerate, to the forfeiture of its social position, and with it of the homage it formerly received spontaneously and gratuitously."

At the session of 1848 Oliver Wendell Holmes urged the American doctors to produce their own literature instead of editing the European works, to substitute original for parasitical authorship.

In 1850, for the first time, the American Medical Association held its meeting in the western city of Cincinnati. Many of the members "saw for the first time the almost boundless fields and the broad, green prairies of the West," and gave a new and strong impulse to the work of social organization throughout the profession in the western states. All previous recommendations on medical education were re-affirmed. The production and enjoyment of medical literature was encouraged by a resolution on medical reading clubs, a memorial to Congress on copyright laws, and the establishment of a prize for the best experimental essay on any subject connected with physiology or medical chemistry.

Diversion and sprightliness seem to have characterized the session of 1851, at Charleston, S. C. An important group of delegates went by steamer from New York to Charleston, accompanied in some cases by "fair companions," all of whom were said to have "contributed to the social enjoyment of the occasion." For most of them this was their first voyage on the wide ocean, and when a terrific storm arose the historian describes rather gleefully how his fellow passengers "found abundant employment in the struggle to keep their stomachs in the place where nature designed them," and boasts that he himself, though "never before fairly in sight of the broad ocean, and though feeling a cordial sympathy for the sick, yet being entirely exempt himself, found it a season of peculiar enjoyment."

Perhaps the ordeal through which so many of them had passed made it impossible for them to concentrate on business, for less than usual of importance was accomplished.

The accuracy of certain statistics furnished the committee on obstetrics by an obscure doctor in Georgia, was questioned, and they were subsequently erased from the report. A very bitter battle of personalities ensued, in which the *"Northern Lancet,"* a journal speaking for the professors of the New York University, who were still hostile to the Association on account of its interference with medical education, took occasion to denounce the American Medical Association roundly. But apparently its defenders and champions were in preponderance. For the first time steps were taken to form a separate section for the reception and discussion of original scientific papers, which were now given scant attention on account of the urgency of matters of policy and organization. Entertainment of the delegates was further featured by a steamboat trip up the river to visit rice plantations and by an elegant and costly public dinner at which the historian, who was always an ardent teetotaler, regrets to report that for the first time in the history of the Association, wines and strong drinks, "which beguile the unwary and intoxicate the brain," were freely furnished. Three years later, after a still more elaborate entertainment had been provided by the profession of New York on the occasion of the meeting there, a resolution was adopted recommending to all future committees that they dispense with costly and extravagant entertainments.

In 1852 it was recommended that no medical college should send delegates to the Association, unless it:

1. Have six members on the faculty.
2. Give one course of instruction annually, of not less than sixteen weeks, on anatomy, materia medica, medicine, surgery, midwifery and chemistry.
3. Require that candidates for graduation be twenty-one years of age; have studied three years with some respectable practitioner; have attended two full courses of lectures, not in the same year, and shown by examination that they were qualified to practice.

Powerless in means of legal enforcement, held together by ideals rather than by promise of tangible rewards, the American Medical Association continued its work of improving medical standards for the student, of encouraging the formation of new county and state societies for practitioners, of developing a national medical literature. In many ways progress seemed slow. The sessions were omitted in 1861 and 1862 on account of the Civil War. In 1863 the committee on medical education reported that a reproach and distrust of the medical profession was felt everywhere, and that the chief cause of the weakness of the medical profession was lack of preliminary education. Fashionable medical follies were being followed, including homeopathy, hydrotherapy, mesmerism, and chronothermalism.

In 1864 the constitution was revised to provide for the election of a president the year before he took the chair, thus allowing him to become familiar with the details of the organization before taking on its management. Dr. Davis was elected to serve two terms at the time of the change in policy.

The work was becoming more complicated and the attendance larger. Certain questions that arose could with difficulty be decided in open meeting, and in 1873 a Judicial Council of twenty-one members was created "to take cognizance of and decide all questions of an ethical or judicial character that may arise."

In 1874 changes in the code of ethics were proposed, but the committee appointed to consider them decided against revision and for the distribution of copies of the code to members of medical graduating classes. At this session a plan of organization also was discussed, but it seemed impossible to get properly accredited delegates to take the time to work out details and make decisions. Not for eight years, until the St. Paul session in 1882, were tangible steps taken towards organization.

Both meetings held in St. Paul, in 1882 and in 1901, marked important epochs in the history of the society. In 1882 the New York State Medical Society, which was in reality the original home of the American Medical Association, officially took action to ignore the code of ethics of the Association, and thereby seceded from the organization. Another state society was subsequently formed in New York which subscribed to the American Medical Association requirements, but the two were not consolidated until 1906.

Up to 1882 the scientific papers had been published in the annual Transactions of the Association and were essentially buried. The annual membership dues were $3.00, but a member was not in arrears unless his dues were unpaid for three years in succession. It was customary, then, for a member to remain in good standing by paying three dollars each three years. The membership was fluctuating, and the annual income varied from $2,500.00 to $6,000.00. Membership implied only that a doctor had been sent as a delegate from a county or state society, a medical school, or a hospital. A college or hospital was allowed two delegates and a medical society one delegate for each ten members. The American Medical Association at this time was described as an organization without funds and without a definite permanent membership, an annual mass-meeting with delegates from various societies, often with no mutual bond.

It was estimated that the publication of a journal would require $15,000 annually. At the St. Paul meeting, in 1882, it was decided to open the membership to all members of state and county societies, to increase the dues to $5.00 annually and to establish a weekly journal with a charter and a board of nine trustees. Accordingly, in July, 1883, the first number of the *Journal of the American Medical Association* appeared under the editorship of Nathan Smith Davis and marked an important step forward in the progress of the Association. In 1897 the Association was incorporated in the State of Illinois.

The organization was becoming larger and more unwieldy. Important matters could not be decided by so large a group, and members would not stay at meetings for consideration of ordinary business. Inspection of credentials of so many delegates was practically impossible and there was no way of controlling or managing so huge and inchoate a mass for the conduct and organization of affairs. Many attempts were made to re-organize the mechanism, but whatever action was proposed was laid on the table as being too time-consuming. A committee appointed in 1886 had attempted for years to get action on its report, which was finally laid on the table. In 1900 a committee consisting of J. U. McCormack, P. Maxwell Foshay, and George H. Simmons again began working on a scheme for re-organization. A comprehensive report was published in the *Journal* just prior to the meeting, permitting every subscriber to familiarize himself with the reasons for and the methods of the proposed change. The outstanding feature of the new plan was the formation of a legislative body to be known as the House of Delegates, which was not to exceed 150 in number, and which should meet for a business session before the scientific session began its program.

The important meetings that marked the re-organization of the constituent societies, as well as of the American Medical Association, were held at the Ryan Hotel, St. Paul, in 1901. Dr. John F. Fulton was Chairman of the local committee on arrangements. The late Dr. A. W. Abbott, of Minneapolis, was elected to represent Minnesota in the first House of Delegates, which marks the end of the old American Medical Association and the beginning of its present strength and structure.

A portrait of Nathan Smith Davis, in his eighty-fifth year of life and sixty-fifth year of active practice, was presented to the Association at the meeting in St. Paul, with appropriate ceremonies. The Association was fifty-four years old, and, remarkably enough, its founder was still alive and able to realize that the organization for which he had laid the foundation stones and which he had fostered for so many years had become a power and was entering upon a new era of activity.

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ATYPICAL HYPERTHYROIDISM WITH REPORT OF CASES*

By C. A. McKinlay, M.D.

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Study of the predisposing causes of a disease, especially one of unknown etiology, always challenges clinical interest. Indeed, in most disease processes a combination of causes exists, the direct one (in infections the invading microörganism) and also the indirect one of individual susceptibility. A few cases that varied from the routine have aroused interest concerning predisposing factors, diagnosis, and treatment, and form the basis for discussion. A single atypical case may stimulate the medical imagination more than scores of routine cases.

The constancy of tachycardia, one of the so-called cardinal symptoms of hyperthyroidism, is quite striking, and its correlation with the intensity of the disease as measured by the increase in oxidative processes is definite. Read[1] established a formula in which he found it possible to predict from the pulse rate and pulse pressure the basal metabolism within 20 per cent in 91 per cent of cases and within 10 per cent in 60 per cent of cases. Sturgis and Tompkins[2] state that increased basal metabolism taken at complete rest is seldom found with a pulse rate below 90 per minute and rarely below 80 per minute.

In the group are described nine variants from the general rule of tachycardia, that is, cases with pulse rates below 90. The pulse rates were taken as a rule after a thirty-minute rest period in bed. Six were individuals over fifty years of age who had adenomatous goiter with hyperthyroidism; one was twenty-seven years of age. In the four other cases not illustrated by charts the ages were fifty-two to seventy-six years with pulse rates and basal metabolic rates as follows: 71 and plus 19 per cent, 76 and plus 34 per cent; 69 and plus 58 per cent; 86 and plus 26 per cent; 86 and plus 17 per cent. Moderate congestive cardiac decompensation existed in one and severe dental infection with bronchitis in another. The other two were cases of exophthalmic goiter, one of which represented the cyclic variation in the disease, and one, subsidence of symptoms due to iodin treatment. The diagnoses were established by the clinical picture and the laboratory findings.

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*Inaugural thesis presented before the Minneapolis Clinical Club, March 17, 1927.

While there may be a tendency on the part of certain observers to ascribe such variations in symptoms to an altered or perverted thyroid function, emphasis should be placed on the variability of the individual. Reference is not here made to the types of hyperthyroidism as taught by Plummer[3] but to variation in individuals in the same group diagnosed as exophthalmic goiter or adenomatous goiter with hyperthyroidism. This is well illustrated by Case W. G., M., age 27 years (Fig. 1) observed with palpitation, weakness, excitability, tremors, and a thirty-pound weight loss, with diagnosis of adenomatous goiter and moderate hyperthyroidism. The pulse rates were 85 and 77 and the basal metabolic rates were plus 33 and plus 31; after operation the pulse rate was 56 and the basal metabolic rate minus 3 per cent. This illustrates that the lack of tachycardia was more apparent than real, and that there actually existed an increase of pulse rate of over 20 per minute. In this connection the recent experimental work of Dr. Kunde[4] at the University of Chicago should be mentioned. She found that by administration of thyroid substances to the dog and rabbit all of the cardinal symptoms of hyperthyroidism could be produced, including tachycardia and a disturbance in the conducting mechanism of the heart. Weight loss depended entirely on an undetermined nutritional state. Some animals retained a constant weight while others lost as much as 35 per cent of their initial weightt. In other words, variation in the manifestations of hyperthyroidism were brought about by the use of increased amounts of normal thyroid substance.

Case S. B., female, aged 62 years (Fig. 2) was observed with weakness, nausea, vomiting, weight loss, adenomatous goiter with a pulse rate of 88, and a basal rate of minus 6 per cent.

Diagnosis of adenomatous goiter with hyperthyroidism in a period of remission was made. This conclusion, I believe, was substantiated six months later by an increase in the intensity of all symptoms, including a basal rate of plus 23, following psychic trauma.

One of the cases, G. C., male, aged 53 years (Fig. 3) included as adenomatous goiter with mild hyperthyroidism had slight dyspnea, pulse rates not over 62 with serial basal metabolic rates of plus 26, 17, and 12 per cent and postoperative, minus 3, 7, and 8 per cent. This type of case is usually classified as a non-toxic adenomatous goiter, but illustrates an increase in basal metabolism which, associated with the clinical findings, suggests a definite hyperthyroidism.

These cases emphasize the existence of a mild degree of hyperthyroidism over appreciable periods of time without cardiovascular change as evidenced by tachycardia and with tendency to remissions. Over a considerable period insidious cardiac involvement may occur and auricular fibrillation supervene. Not uncommonly adenomatous goiter of a mild toxicity has escaped detection at a time when removal might have prevented further cardiovascular change. Cardiac decompensation with chronic passive congestion predominates the clinical picture of disease usually at a relatively late stage and, according to some observers, does not occur without other causes aside from or in addition to hyperthyroidism. It seems probable, from a study of this group with only moderate symptoms, that the so-called non-toxic adenomatous goiter which is followed by auricular fibrillation has, in reality, exhibited at periods in its course definite and demonstrable symptoms of hyperthyroidism, including weakness and slight elevation of the basal metabolic rate with or without increased pulse rate.

Of the three cases of exophthalmic goiter included, case H. S., female, aged 29 years (Fig. 4) commanded greatest interest. On the first examination the positive eye signs and thyroid enlargement combined with a history of weakness, excitability, and weight loss strongly suggested exophthalmic goiter. With a pulse rate of 78 and normal basal metabolic rate, the case might be said to represent the anatomical structure of disease without the disturbed functions usually found. In other words, a partial or incomplete disease picture was present, but the findings were suggestive enough to make exclusion of exophthalmic goiter impossible. While error in diagnosis might be ascribed as the explanation, in view of later developments that is doubtful. Following a series of observations over a period of several months, the pulse rate and the basal metabolic rate were seen to increase above normal limits and complete the disease picture. The patient was first seen in a period of remission of symptoms. During the period, nevertheless, sufficient evidence was present to predict with some certainty the course of the disease. Undoubtedly cases may not always be recognized in a stage of cyclic remission of the disease where, as illustrated above, the pulse may approach normal and only a latent excitability or slight fatigue be present. Here the past history of exacerbation of symptoms with weight loss is important as well as continued observations as to the course of disease.

The only factor that supervened in the last mentioned case and one to which much importance attaches was an acute respiratory-tract infection. In other cases which have been observed over appreciable periods of time without surgical intervention or with insufficient thyroidectomy, the baneful influence of respiratory infection had also been noted. Acute respiratory-tract infection may not uncommonly be followed by increased intensity of the disease. A disease that has none of the usual characteristics of an infectious process, such as fever

Fig. 1. W. G., Male, 27. Diagnosis: Adenoma of thyroid with hyperthyroidism.
Low postoperative pulse rate, which indicates a low normal rate and which partly accounts for absence of tachycardia.

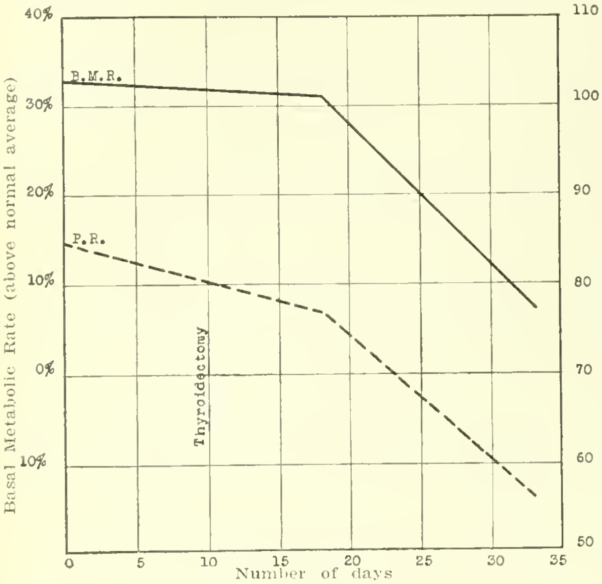


Fig. 5. E. S., Male, 31. Diagnosis: Exophthalmic goiter.
Showing correlation of basal metabolic rate with the pulse rate which was relatively low. Increase of both after acute respiratory tract infection. Lugol's solution used.

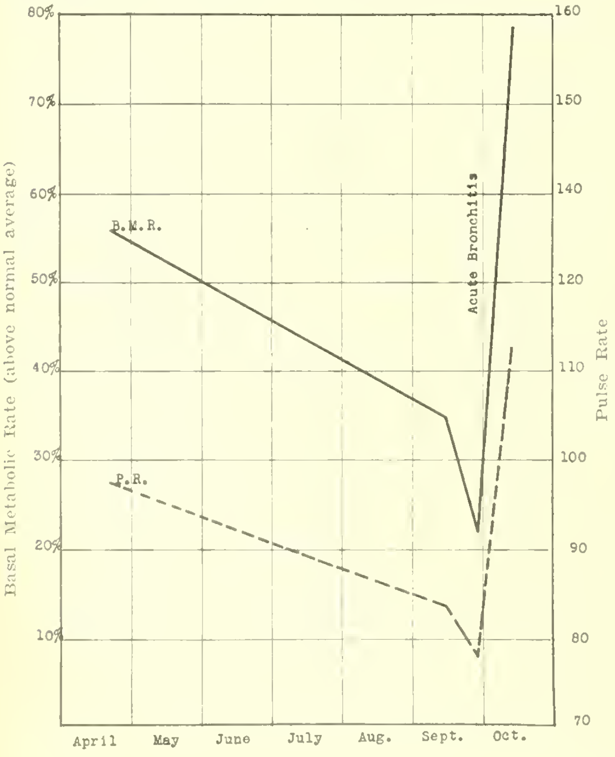


Fig. 2. S. B., Female, 62. Diagnosis: Adenomatous goiter with hyperthyroidism.
First observed in period of remission. Later observations after exacerbation of symptoms.

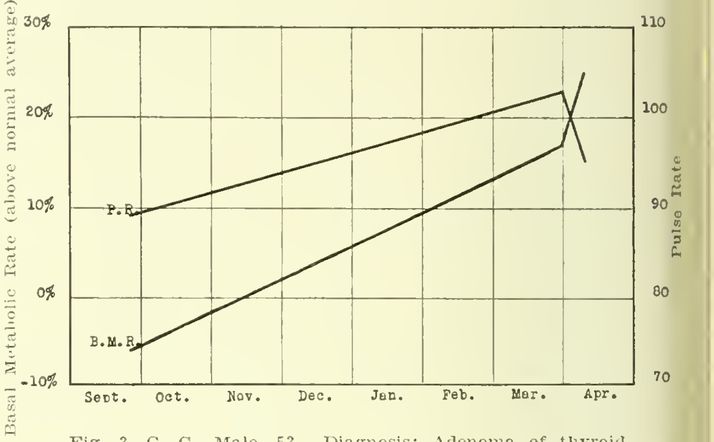


Fig. 3. G. C., Male, 53. Diagnosis: Adenoma of thyroid with mild hyperthyroidism.
Dyspnea and increase in basal metabolic rate indicative of mild hyperthyroidism associated with slow pulse rate.

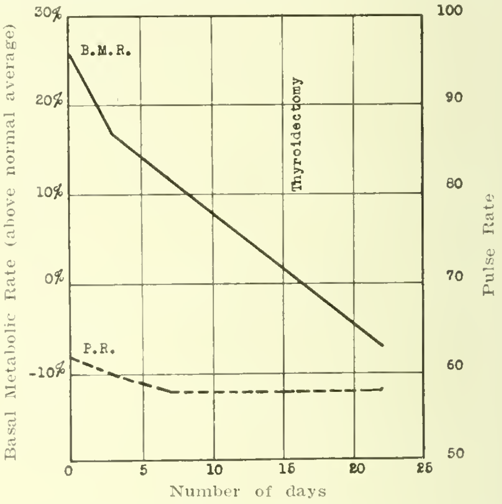
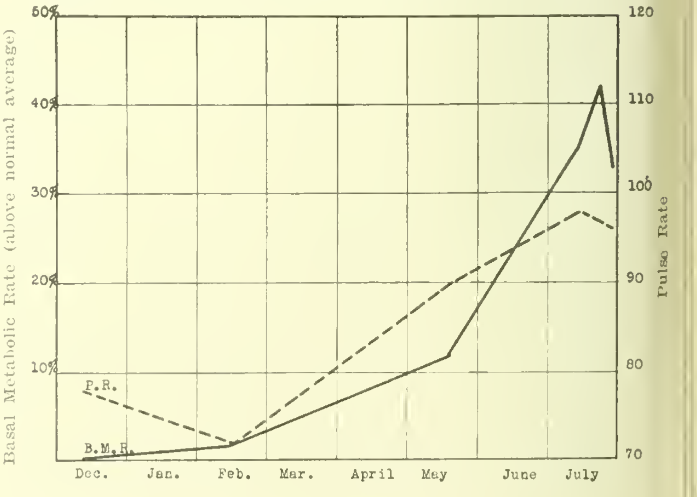


Fig. 4. H. S., Female, 29. Diagnosis: Exophthalmic goiter, stage of remission.
History and physical signs suggested above classification although without increased basal or pulse rates. An acute respiratory tract infection preceded exacerbation.



and leucocytosis, still has frequently been immediately preceded by acute infection. To be more specific, in a recent series of twenty cases of hyperthyroidism one-third showed such relationship. This incidence of infection was over twice as great as in a large control group of colloid goiter.

Case E. S., male, aged 31 years (Fig. 5) with exophthalmic goiter is of interest in that the pulse rate was 88 with moderately severe exophthalmic goiter and that after the use of Lugol's solution the rate dropped to 68 although the metabolic rate never became normal. Again, the baneful influence of acute infection is seen followed by increased intensity of the symptoms of disease.

The two following cases are reported to illustrate how chronic infection mimics the picture of hyperthyroidism, and to emphasize the necessity for detection and eradication of foci of infection. M. B., female, aged 32 years, gave a history of nervousness, excitability, tremors, occasional nausea and vomiting, and palpitation of four years duration. Similar symptoms were noted seventeen and fifteen years ago when the patient was declared to have chorea. There was no appreciable appetite or weight change. Examination showed moderate excitability, tremors, a small thyroid enlargement, and a pulse rate usually between 80 and 90 but reaching over 100 at times in the record. A single basal metabolic rate was plus 20 per cent; mild hyperthyroidism was considered probable. Thyroidectomy was not recommended on account of the moderate nature of the process. The next chapter in the story is the return of the patient one year later as a post-operative case for five months with the report that the operation did not change her condition except for three or four weeks immediately following it. The thyroidectomy had been well done, and there was no palpable thyroid substance; her basal metabolic rate was minus 3 per cent. While more than one observer agreed that her complaint had its basis in the thyroid, its eradication afforded no relief. Here other sources of toxemia should have been eliminated. In going over the patient again with the idea of finding the source of toxemia, nodes on the fingers were noted, stated to have had their origin at the time of the attack of chorea. Check up of the heart revealed a systolic murmur well transmitted into the axilla. Caseous material could be expressed from one tonsil. Certainly the evidence pointed to the aftermath of a rheumatic infection with an old mitral regurgitation and the possibility of a low-grade endocarditis existing at the present time. From the oversight of chronic infections associated with neurotic symptoms which are thought to represent hyperthyroidism and which lead to thyroidectomy, may arise some of the statements not uncommonly heard, of the lack of value of operative procedure. While there may be a tendency to describe certain cases that do not respond to thyroidectomy as polyglandular, on careful examination the missing link may often be found in an overlooked chronic infection.

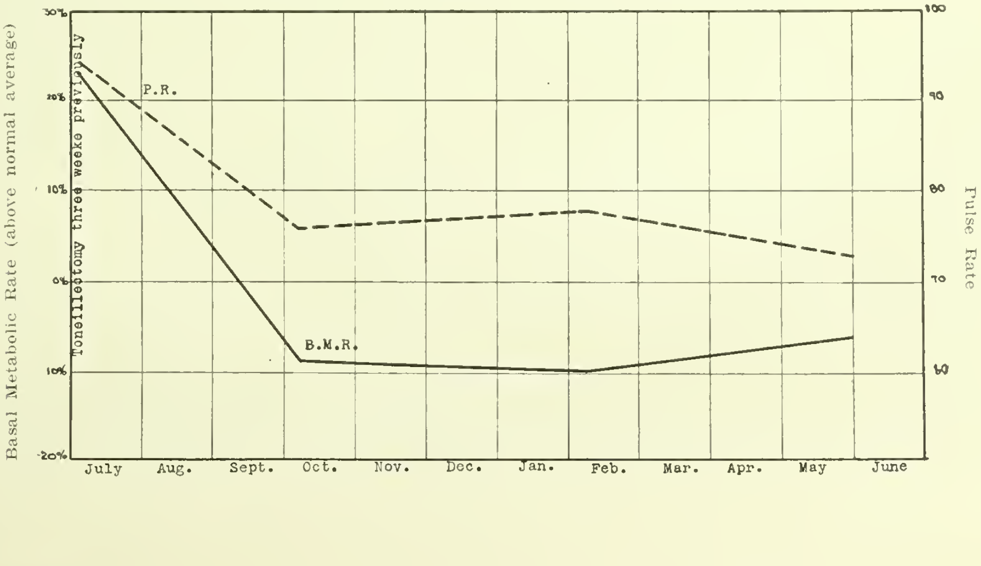
Other infectious diseases from which confusion has arisen include incipient pulmonary tuberculosis and severe head infection from tonsils, teeth and gums, and, less commonly, the paranasal sinuses. In case L. H., female, aged 32 years (Fig. 6) chronic tonsillar and dental infection was present in addition to moderate thyroid enlargement, excitability, weakness, and labile pulse rate. The appetite remained good. Following eradication of the foci of infection, symptoms improved although the pulse rate retained its labile character.

SUMMARY

A series of selected cases of hyperthyroidism with relatively low pulse rates has been studied as to predisposing causes, diagnosis, and treatment. The age was usually above fifty years and the goiter adenomatous in type. By following the course of disease after thyroidectomy, in one the pulse rate apparently returned to a very low normal rate. It is suggested that one explanation of lack of apparent tachycardia is the occurrence of disease in an individual with a normal pulse rate below the average.

One case with bradycardia before and after thyroidectomy showed, before the operation,

Fig. 6. L. H., Female, 36. Diagnosis: Chronic tonsillitis,pyorrhea, and gingivitis.
Clinical picture of weakness, excitability, and moderatediffuse thyroid enlargement simulating hyperthyroidism. Improvement in all symptoms after eradication of foci of infec-tion but still with labile pulse.



slight increase in the basal metabolism with a distinct postoperative fall. The slight increase in oxidative processes was probably significant of hyperthyroidism and indicates the mode of development of auricular fibrillation noted at times in the so-called non-toxic goiter. That is, such goiters over long periods of time have probably had minimal periods of hyperthyroidism.

Another explanation of a lack of tachycardia has been illustrated by a later increased intensity of disease suggesting that the cyclic variation in the manifestation of hyperthyroidism should be kept in mind. Instances are reported of the exacerbation of disease preceded by acute respiratory tract infection and also the simulation of the picture of hyperthyroidism in cases with chronic infection.

Although there is a tendency to ascribe variation from the usual disease picture to an altered or perverted secretion of the thyroid gland, clinical study indicates in certain instances reported that variation in symptoms was due to the individual rather than the disease. Experimental evidence quoted indicates that all of the cardinal symptoms of hyperthyroidism can be produced by administration of normal gland substance and that some of them may be absent without determined cause.

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(For discussion see The Journal-Lancet of March 1, 1927, page 103.)

A TRIBUTE TO THE MEMBERS OF THE SOUTH DAKOTA MEDICAL VETERANS' SOCIETY*

By Gene Justice
Author of the Medical Pilgrim's Progress

It is now more than thirty years since you opened an office for the practice of medicine in South Dakota, or you could not be a South Dakota Medical Veteran.

You have to your credit an assortment of successes and failures, joys and sorrows, but on the whole you have met with at least fair success. You have reached an age where you are entitled to live to some extent in the past, and to-night, as you are somewhat reminiscent, your mind goes back to the time of your first appearance in the little country town where you began to practice. You were little more than a green boy. You had your medical education, but you had been kept so busy acquiring knowledge taught in schools that in the ways of the world you were almost childlike.

How vividly you recall the renting of your office, the scant furniture that your slender purse enabled you to buy, your first patient, your first trip into the country, and the first money that was paid you for medical services. You vowed that you would never spend that shining silver dollar. You were going to keep it as a souvenir; but, you soon became so distressingly poor that you were forced to part with it.

You remember how you longed for professional associates, how you made trips to other towns to visit medical men in order that you could pick out the ones that you could trust; how, later, you had called these men in consultation in difficult cases to the benefit of both yourself and your patient, and how these men would stay, hour after hour, and fight, shoulder to shoulder, with you until your patient was safe. Professional friendships made under such conditions were of a most binding and lasting character.

You remember other times when you needed the help of these men. The distance and the emergency were so great that you could not call them. Everything depended upon you. Here you must "Tread the winepress alone." The black angel of death stood by and taunted you, mocked you, and because there was no avenue of escape you stood at your post and fought, and often put the death angel to flight.

You soon learned that office work was not nearly as hard, neither was it so important, as the visit to the bedside. You found greater satisfaction in going to the bedside, where there was dangerous illness or intense suffering, and coming away knowing that you had saved life or relieved suffering, than you did in treating an office patient who was not greatly in need of your services.

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*An address prepared for presentation at the formation of the Medical Veterans' Association of South Dakota, but not delivered.

It does not seem possible that the ultra-scientific office man of to-day ever experiences that joy of achievement that was given to the old country doctor who had risked his life fighting his way through darkness and storm to the bed of acute suffering and then seeing the sufferer smile again.

Riding in the country, day and night, through all kinds of weather, was hard and often dangerous work, but you did not complain. You rather gloried in the fact that you were able to endure hardness.

On these trips the horse was your constant companion, and you soon learned to love and reverence a good horse.

It may be that you hired livery horses for a time, but you soon learned that you must possess horses of your own if you were to get the best results.

No doubt you were badly cheated on the first horses that you bought, but you soon learned to keep an eye out for good horses, and later actually became a good judge of them. You recall with what anxiety you selected and matched up a team, and how carefully you fed and worked them out until you were satisfied that they were in a condition to endure hardships. Then one night when the roads were almost impassable to any one but a country doctor, a call came from seventeen miles out in the country. You took your carefully picked team and made that trip in ninety minutes.

You found a woman with eclampsia. You worked all night and part of the next day before you thought it was safe to leave. You started your team home with some misgivings, but as you drove down the road and your horses seemed as fresh as ever you knew that they had stood the acid test. You were jubilant. You had saved a mother and babe from impending death. That in itself was an achievement, but it was all in the day's work. You were expected to save life, but the crowning glory of the day was in the fact that you had demonstrated that you belonged to that distinguished company of men who "Know a good horse when they see one."

No South Dakota Medical Veteran will ever forget the terrible cold spell of January and February in 1899 when for weeks the mercury never rose above zero. You had been driving every day and often at night in that awful cold, but on the night that the cold and wind reached the peak you had promised your wife that you would not go out. That was the night when all over South Dakota people sat up to keep the fires going. At eleven o'clock a call came. You compromised with your wife by telling her that you would get the liveryman to drive you out. He refused, saying that he would not risk his life in such a storm. You dressed for the trip in the hall. Then your face grew stern, and you dashed through the living room without even looking at your wife. She thought that you were rude and unfeeling. But what else could you do? The call was a call to duty, and with the old-fashioned country doctor a call to duty must be obeyed.

Once in the stable you selected the roan and the buckskin. They were a little hard to manage, but they were the team for great emergencies. You made ready on the windward side of the barn where it was not so bad, but as you drove out and the full force of the blast struck the team they wavered. You, however, held their faces to the storm, and they soon charged into the teeth of the blizzard with a courage worthy of the Arabian blood that coursed through their veins. This team was expressive of the man who had selected them. They, like their owner, rejoiced in combating and conquering the elements. They were a team among ten thousand. The further they went the more you marveled at their courage and endurance, and, though suffering intensely with the cold, your spirits were high. You were glad that the liveryman was enjoying the comforts of his home, and that you were fighting it out alone, you and the roan and the buckskin.

Those were the days of red-blooded men and wonderful horses. Both fought honestly and in the open. The "do or die" courage of a hot-blooded horse has put many a thoughtful man to shame and spurred him on to greater and better things.

An Old Testament writer must have understood this when he wrote:

"Hast thou given the horse strength? Hast thou clothed his neck with thunder?

"Canst thou make him afraid as a grasshopper? The Glory of his nostrils is terrible.

"He paweth in the valley, and rejoiceth in his strength: he goeth on to meet the armed men.

"He mocketh at fear, and is not affrighted: neither turneth he back from the sword."

A feeling of sorrow that is akin to pain comes over you to-night as you realize that the doctor's horse is no more. His passing was prophetic of the passing of the old-fashioned country doctor himself.

To-night, as you review many other changes that have taken place in the profession, you realize that these changes were in the main very depressing to you. Not the changes that accompanied scientific progress (you welcomed them) but the changes in customs. You found it necessary to send your difficult cases to a clinic or hospital instead of calling a colleague in consultation. You found it necessary to send even certain minor cases of surgery to a hospital. You felt that in these cases your patients were getting no better service than they could have had at home, and it cost them very much more. You felt that both you and your patients were robbed. You felt that commercialism was taking possession of the noblest profession under the sun, and there was no way to check it. You saw this commercialism grow until some general practitioners were willing to sell their patients to certain surgeons and other specialists for a share of their fee. You discussed this with your friends in the profession, and they told you that never would they stoop to such dishonorable conduct. Later you saw some of these men slip, and when you asked them why they said that they were so pressed financially that they could not resist the temptation to try and recover some of the money that they felt justly belonged to them.

As time went on, you stood more and more alone, but you had a few medical neighbors of your own kind with whom you could commune. Then one of these men moved away and another died. You came home from the funeral of your friend much depressed. It seemed that they were all gone.

You were very morbid that night, and you let your feelings and your imagination sweep you off your feet, as it were. You grew envious of the surgeons and specialists with their larger incomes and easier work. You knew well enough that intellectually you were their equal, and that you could have occupied the same positions that they did if you had taken the necessary steps to do so, but you had seen your guiding star of duty in the care of the pioneer women and children of the homesteads in South Dakota, and had gloried in the fact that you had shared their poverty and hardships. This night, however, that glory faded, and you saw yourself broken financially and professionally. You had played the game squarely and had lost. The more you thought the more morbid and rebellious you became, and the more you gave your imagination play.

On retiring that night you repeated the Regular Physician's Prayer: "By Thy grace I have been called to watch over the sickness and health of men. Be my strength, Good Lord, in this great undertaking and bless my work that it may be good. Let me be filled with love of men and my art, and do not let desire for gain or position or fame interfere with my duties." You had prayed that prayer every night since you began the practice of medicine, but this night it brought you no peace. Everything seemed wrong. You felt defeated, deserted, neglected, and alone. Where could you turn and find a kindred spirit?

In agony of soul you cried: "I, even I only, remain a prophet of the Lord."

At last you fell into a troubled sleep and you imagined you heard a voice saying, "Yet have I left me seven thousand in Israel, all the knees which have not bowed unto Baal."

You did not waken, but probably the thought that you were one of a company of seven thousand caused you to sleep more soundly and you dreamed. In your dream you saw great thrones and them that sat thereon. You recognized among a great throng the soul of your late departed medical friend, and as he approached one of the thrones, he that sat thereon arose and with outstretched arms ran to meet him saying, "Come, ye blessed of my Father, for I was sick, and ye visited me."

You awoke and as you lay thinking a new kind of philosophy took possession of your mind. A light broke in upon your soul. No longer did you envy the city doctor with his large office practice, his seemingly easy life and large income; rather, you pitied him. You were glad that you had chosen a country practice and glad that you had lived in a generation before the country doctor had become extinct. You felt that none coming after you could ever enjoy the rich experiences in doing good that you had enjoyed, and with these thoughts you again fell asleep.

The next day you went about your work as usual, and those with whom you came in contact never once suspected that you had seen a vision. They may have noticed that you were a little less abrupt in your manner, a little more considerate of the feelings of others, a little more gentle, a little more painstaking with your work, but that was all.

You have never been the same man since the experience of that night. Your outlook on life has been broader and more kindly, and now as you are nearing the end of the trail the things that worried and distressed you in former years seem small compared with the real things of life.

While you are still vigorous you know that soon, very soon, you will be forced out of the race by younger men, and because of the experience of that night you are ready, when the time comes, to accept the situation gracefully.

You have much to be thankful for, not the least of which is the comradeship afforded by this Society, for you know, even though you may belong to many clubs and societies, that there is no brother like an old time medical brother.

You also have reason to be thankful that during your many years of practice you have conducted yourself with such decorum that you have been judged worthy to become a member of the South Dakota Medical Veterans' Society.

PERINEPHRITIC ABSCESS: REPORT OF A CASE*

By Louis Dunn, M.D.

MINNEAPOLIS, MINNESOTA

The most interesting feature of this case was the difficulty in arriving at a diagnosis.

The patient was a woman, 67 years of age, pale and somewhat emaciated. She entered the hospital at 4:00 P. M. on January 25, 1928, with a temperature of 98° and pulse of 80. At 8:00 P. M., the same day, her temperature was 102.4,° probably due to a long automobile ride.

She presented a moderately distended abdomen with a hard mass occupying the right flank. This extended from the margin of the ribs to within one inch of the right anterior superior spine and from the right margin of the abdomen halfway to the median line. The mass was firm, smooth, and rounded anteriorly. It was not moved by respiration or on palpation and was moderately tender. For years a right floating kidney had been felt in the flank or in the pelvis, as it occupied either of these situations.

On November 27, 1927, she became ill with what was considered colitis or flu. She vomited on several occasions and at times had sharp pains in the lower abdomen in the right side and back. She ate regularly though but small quantities. There had been no jaundice. She had no pain on taking food. There had been no hematuria, and no pyuria and no frequency or difficulty in urinating. The bowels had been quite regular. There had been no tar-colored or clay-colored stools. She slept but little. She occasionally had nausea. For some time the feet and legs, to the knees, were quite edematous. No edema was present elsewhere.

The patient had been referred as one with a "surgical kidney."

"*X*-ray plates of the urinary tract showed the outline of the left kidney clearly in a normal position and of normal size. There was a dense oval mass on the right side about 13 cm. long and 11 cm. wide on a level with the second, third, and fourth lumbar vertebræ. There was a calcified area within this shadow, just above the level of the transverse process of the fourth vertebra. Gas outlines the colon quite clearly. The hepatic flexure and the first part of the transverse colon were displaced downward and to the left."

"Ureteropyelograms were made on both sides. The left shows a normal condition. The calices and pelvis are larger on the right than on the left and lie within the dense shadow over the right side. There is a definite kink in the ureter just below the ureteropelvic junction. The calcified area on the right side can not be made out in these plates, but in plates where it is shown, and these being superimposed on the pyelographic plate, the shadow is just behind the ureteral kink."

Cystoscopic examination of the bladder demonstrated it to be practically normal. Ureteral orifices are normal, the right one being a little larger. The right kidney was catheterized with a Whistletip No. 6 *x*-ray catheter, which could not be passed into the kidney pelvis. After the first few centimeters, there was considerable difficulty on inserting it. The left kidney was catheterized with a plain No. 6 Whistletip catheter. Specimens were collected from both sides. The right showed 1-2 pus cells and 40-50 red ones. The left 1-2 pus cells and 200-300 red ones. A differential phthalein test was made and appeared from the right side in 8½ minutes and from the left side in 9½ minutes. A plain *x*-ray was taken showing the catheter had not gone over the brim of the pelvis. Cultures from each side showed no growth.

The Cole-Graham dye test by mouth developed

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*Presented at the New Asbury Hospital Staff Meeting, March 7, 1928.

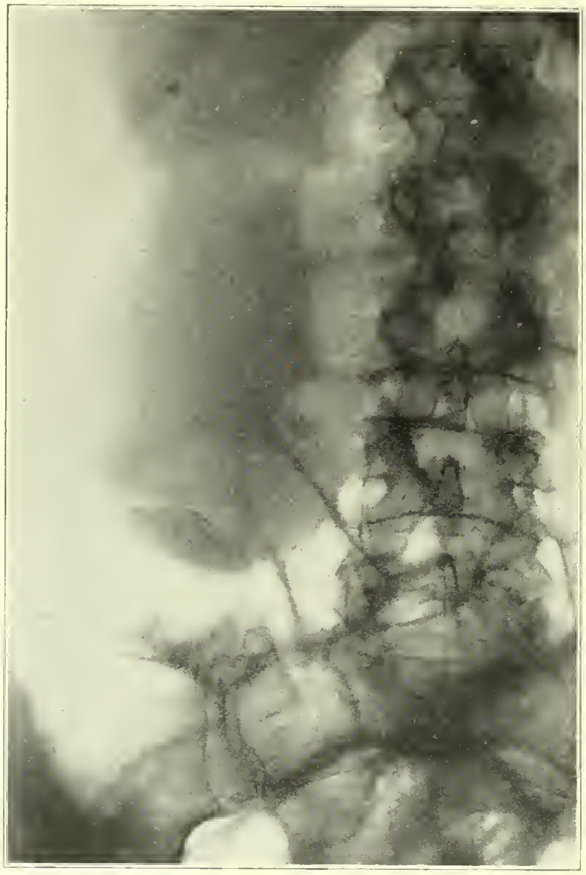

Fig. 1. The abscess to the right of spine and below the ribs is outlined by the shadow at this place, also the calcified area opposite the fourth lumbar vertebra.

a normal gall-bladder. The calcified area on the right side, noted in other plates, lies about 2 cm. below the tip of the gall-bladder. There were no gall-stones.

The patient was in a wretched condition on entering the hospital. While examinations were being made, every effort was made to improve her condition. After the examinations the following things were eliminated. Kidney tumor, because the calices and the pelvis were not distorted. There had been no hematuria. Carcinoma was improbable because the mass had been present and palpable only about two weeks. Hydronephrosis with dilatation of the kidney was eliminated by the pyelogram and a functionating kidney on the right side. An enormously hydrophic gall-bladder could not be present because of a normal gall-bladder shadow. It was not an ovarian cyst with a long pedicle, by virtue of the mass being in the kidney region and no tumor having been detected previously in the abdomen. A retro-peritoneal fibroma was not considered. This left perirenal abscess, a retrocecal abscess or a cyst, as the probable cause of the right side mass.

On February 4, 1928, she was operated on. She was turned on the left side and local anasthesia was produced by injecting the two upper lumbar and the four lower intercostal nerves. The patient was distressed on beginning the injection. When this was completed and she was turned on her back, she was in extremis. Ether, by inhalation, was given in small quantities for its stimulating effect. This revived her sufficiently to allow the operation to proceed. After infiltrating the abdominal wall transversely two finger-breadths below the 12th rib, an incision was made so that the upper end would open the abdomen. Palpation within the abdomen disclosed a smooth mass, with no adhesions and of the consistency of a uterine fibroid. Extending the incision downward towards the spine and deepening it below the abdominal muscles, an abscess cavity was entered. This discharged odorless yellow pus of the consistency of 40 per cent cream, which had to be encouraged in discharging by irrigating with a saline solution. Three pints of pus were evacuated. Connective tissue bands, passing through the abscess cavity, were severed. A number of accessory pus cavities were connected with the primary cavity. This cavity was packed with two large strips of gauze to control bleeding. Two Dakin's tubes were left in alongside the packing and the upper part of the incision was closed. The kidney was not recognized, nor was the calcified area found. The operation was followed by no great reaction. The pulse was 80 and the temperature 99.2.° However, the pulse became 150 and varied from 120-160 until her death, which occurred on the eleventh day following operation.

Two days after the operation a left side parotitis developed. Three days later one and one-half ounces of pus were evacuated from the gland. Examination of the pus from both the parotid and the perinephric abscess showed both staphlococci and streptococci.

After the operation it was noted that when the patient was turned on the left side the heart rate was high, and difficulty was experienced in breathing.

A limited post-mortem was allowed. No peritonitis was present. The abscess cavity was practically obliterated. The kidney formed the anterior wall of the pus cavity, and this was the mass recognized and palpated directly under the anterior abdominal wall. The anterior kidney surface presented two subcapsular hemor-

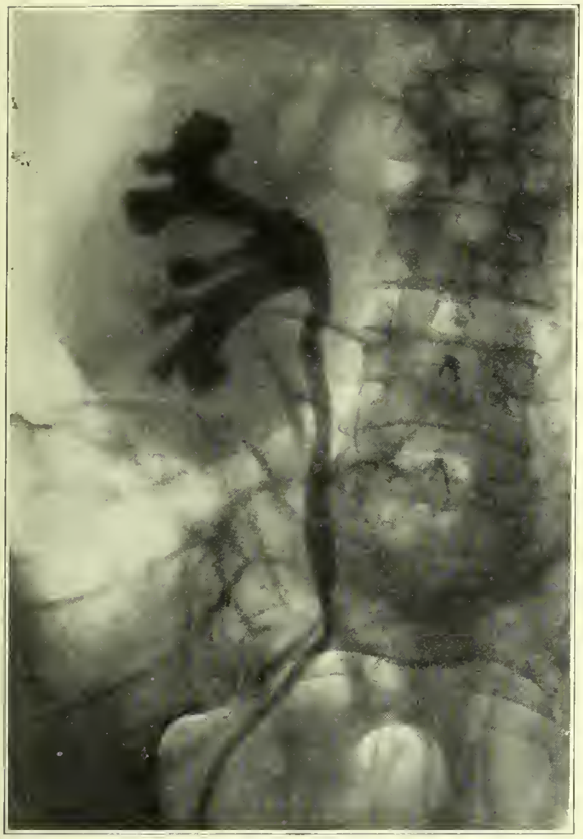

Fig. 2. Enlarged pelvis and calices of the right kidney due to pressure from the abscess.

rhages. Two infarcts were found under the hemorrhagic area in the kidney. The posterior surface of the kidney presented numerous miliary abscesses, also a layer of fibrin where it had been in contact with the abcess. Prolonged search failed to find the calcified area. The gall-bladder appeared about as shown on the plates as to position and size, no stones being present.

Sections made from the kidney showed a marked parenchymatous degeneration. The cells of the tubules were in various states of disintegration, many of them being entirely separated from the basement membrane, lying loosely in the lumen. But few blood vessels were seen. The glomeruli were small and the tufts shrunken away from the capsule; some blood and fibrin had escaped from the tuft vessels. There was no evidence of a chronic nephritis, no fibroid glomeruli or crescents present, and no pus in the tubules. This picture is that of kidney degeneration most readily explained by great pressure.

Infection may extend to the perirenal tissue by different paths. An infection of mild intensity may gradually infiltrate the perirenal fat and result in a fibrosis. When the process is more rapid a perinephric abscess can occur. This abscess is most frequently posterior to the kidney and is prone to extend into and destroy the perirenal fat. In this case, recognizing the wide excursions of the loosened kidney, it is not surprising that the kidney formed the anterior wall of the abscess cavity, projecting the anterior abdominal wall. Infection may originate outside of or from within the kidney. It more frequently extends to the perirenal fat from the kidney and is most likely to occur from subcapsular or cortical abscesses. I take it that this was the source of infection in this case, as numerous small abscesses and several infarcts were found subcapsularly.

Doubtless it was a hemotogenous infection and was secondary to some pre-existing foci or general infection. This is borne out by the fact that the microscopic examination demonstrated the kidney pathologic histology to be that of an acute process.

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A NEW VARIETY OF INFLUENZA

We certainly have had to deal with all kinds and types of this mysterious disease that we choose to call "influenza" because we do not know what else to call it; but now another form has injected itself into the firmament, usually ushered in by nausea, vomiting, tire, and, what is most important, a tremendous vertigo, which leaves people helpless so far as navigation is concerned and from which they must take time to recover.

The nausea and vomiting is not so important because it ushers in many types; not infrequently there is no vertigo following it, and the patient makes a speedy recovery. But in those afflicted with vertigo there is a great deal of questioning as to why and wherefore. Some patients feel it in their feet, and others, unfortunately, feel it in their heads. A movement of the head from side to side produces an almost equal disequilibrium of the body, and any attempt to walk must be undertaken only when someone is near by to support the patient. Then, too, many of these patients feel a great weakness which continues rather longer than in some of the other forms of influenza. There seems to be nothing to do for it except put the patient to bed and tell him to wait there until he gets well. Here vaccine does little good, or none at all, and so far no remedy has been found to do anything but mitigate some of the symptoms. Science is still looking for the bacillus of influenza. So far it has not been discovered, although many claim that they know what it is; but if they do know, they are unable as yet to do anything with it.

If a patient has had an attack of vertigo he will not forget his experience. He may think he is going into eternal damnation and long for death, but, somehow, after ten days or two weeks he begins to brace up, and the vertigo gradually subsides although it does not entirely disappear for sometimes weeks or months.

It is sincerely to be hoped that no other form of torture can be devised by the bacillus that is at the bottom of the influenza epidemic. But having once experienced several varieties of influenza and then to succumb to the vertigo type, or perhaps we might say the type having the disturbance of the semicircular canals as one of the chief symptoms, is something the editor does not care to go through again; and it seems peculiar in this part of the country at this time. Nothing very definitely like it has occurred before, but with the onset of alleged spring, it seems to make itself manifest.

RURAL PHYSICIANS

A letter appears in the last issue of the *American Medical Association Bulletin* from the *National Grange* speculating as to what the country is going to do for doctors. They claim now that the medical student pays too much money and spends too much time acquiring his degree of medicine and that very few who spend from eight to ten thousand dollars acquiring their training and equipping themselves for the practice of medicine are willing to go into small rural towns. For instance, a farmer's wife is sent to a hospital in some town in North or South Dakota, and there is operated on for her trouble. She is unable to stay away from home very long, or at least they are unable to keep her in the hospital very long, so she is allowed to go before her wounds are properly healed. When she gets home there is no doctor in the town, and she either has to go back to the hospital and be instructed in the art of self-care or have someone take care of her surgical wound for her. This usually works out very well, but, of course, there is an element of danger in the situation in that certain definite nursing methods are not always carefully carried out and her wound may become infected or delayed in its union.

The various welfare groups scattered over the states and orders of that kind, and the county nurses may be able to look after many of these cases, but they cannot possibly take care of them all. Neither can they look after the sick who need constant attention and watchfulness. Nor is it to be expected that the physician and surgeon from an adjoining town will be able to spend very much of his time with such sick people. The plea of the *Grange* is very well founded on the basis that we are demanding too much time in the preparation of our medical students and that it costs them too much money to make the small-town sacrifice. That is one of the newer things that have developed in the course of the last decade, for the medical student to ask himself "What shall I do now, and where shall I locate?"

In the farming class there may be some young man who would like to study medicine, but it is financially and domestically out of the question for him to do that. Yet such men as this are the very men who are needed among the farming class; they know the people; they know, instinctively, the art of medicine and will in time acquire the practice of medicine. It is really a very serious problem, but what is to be done about it? It is capable of much discussion. And here are a Grange that has 800,000 members and a medical profession that has not regained its ordinary proportion of 130,000 and will not regain it until some time in 1965 at the rate things are going on at the present time. The average practitioner in a small town is fifty-two years old, and you can draw your own conclusions as to his willingness to stay in active country practice or whether he will drop out, retire, or die from overwork or exposure.

Dr. William Allen Pusey, a former president of the American Medical Association, has suggested that the time should be shortened in the education of the medical man, and yet it is realized that he must have at least a year's hospital training before he is equipped to go out into the field of medicine. The Grange urges very hard that the American Medical Association take the matter up and see what can be accomplished. A few years ago, before the reorganization of medical societies, we had 160 medical schools, but now there are not more than 69. It must be remembered, too, that in considering this question there should be no lowering of medical standards. But if nurses can be trained for work in less than three years, why cannot the average medical student acquire sufficient information and hospital experience to fit him for the practice of medicine in less than six years?

It has been stated that authoritative medical opinions are necessary in 10 per cent of illnesses and accidents; that is presuming that the people are sufficiently informed about themselves, which is not possible. This leads us to consideration of the fact that these people who are indifferent or careless, or below par mentally, are the first that turn to the cults, where they do not receive adequate medical care.

It is to be hoped that the coming of the American Medical Association will at least begin a survey of this work to see what can be done in the immediate future. Of course, one cannot blame the medical school for getting all the students it can because most of these schools are endowed or under State control and can offer a great deal more than the former type of medical school, which demanded work and less laboratory facilities and less experimental work. What we need now is an actual training in the practice and the art of medicine.

THE A. M. A. MEETING NEXT MONTH

Arrangements are still being perfected for the entertainment of the American Medical Association in Minneapolis, beginning June eleventh and continuing until June fifteenth, inclusive. One very important thing which we have called attention to before and which cannot be too often repeated, is the necessity for registration. A large attendance is expected, and it is very necessary for those who come to be duly registered before they can participate in any of the functions or activities of Association week, and to that end the new Municipal Auditorium of Minneapolis has been made the headquarters for registration. There may be found the Information Committee which will undertake to direct the visitor in anything he wants to know about. It is presumed that a large number of visitors will not be familiar with the town and the Information Committee has been carefully selecting and training a few who are skilled in that work, and they will be ready to help in the giving of information. This group of informants will be held to participate in the activities of the Rotary Club, as well as the National Educational Association which meets in July.

The meeting places are scheduled below, so that no one will have any question about where the various Sections meet; and it is a satisfaction to note that all of the meeting-places are within two blocks of the Auditorium, so that the men will not have to wander far, neither will they lose their way getting from place to place:

Large room in the Auditorium:
  Section on Practice of Medicine, and Section on Diseases of Children.
Stage of Auditorium:
  Section on Preventive and Industrial Medicine and Public Health, and the Section on Gastro-Enterology and Proctology.
Committee Room on the third floor of the Auditorium:
  Section on Pharmacology and Therapeutics, and the Section on Pathology and Physiology.
Main floor of the Lyceum Theater:
  Section on Surgery, General and Abdominal, and the Section on Obstetrics, Gynecology, and Abdominal Surgery.
Second floor of the Lyceum Theater:
  Section on Ophthalmology, and Section on Laryngology, Otology and Rhinology.
Loring Theater:
  Section on Dermatology and Syphilology, and the Section on Urology.
Marigold Ballroom:
  Section on Nervous and Mental Diseases, and the Section on Orthopedic Surgery.
Auditorium of Leamington Hotel:
  Section on Radiology.

The opening night at the Auditorium, at which the various officers will be present, is expected to be a crowded meeting. The president will then retire from office, and the new president, Dr. William Sydney Thayer, of Baltimore, will be inaugurated and will preside over the future meetings. Dr. Thayer is so very well known and so eminent in his profession that he needs no word of introduction here.

On Monday and Tuesday the registration booth is open, and the majority of our visitors are expected to register at that time, although a few come in later, due to unavoidable delays—some coming as late as even Friday or Saturday morning. But we anticipate a heavy registration early in the week, at which time the members of the Association will be furnished with badges or buttons, or whatever insignia are necessary, for admittance to the clinics, Section work, or the Auditorium meetings, and the president's reception on Thursday night. The latter is expected to be a large affair, and there will be dancing after the formal reception is over. This is purposely held in the Marigold Ballroom because the floor there is particularly adapted to dancing, and the room itself is beautifully designed for a large reception.

Various means of entertainment will be provided, naturally, for the men, as well as for the women, and on Wednesday noon and Wednesday evening there will be luncheons and dinners, as well as fraternity banquets, at various hotels in the city. It is just as well to get in touch, during the registration time, with the company that you expect to keep, that is, you will meet your alumni members or fraternity brothers, or whatever group you may want to attach yourself to. The Minnesota Alumni Association meets Wednesday evening at six o'clock at the New Nicollet Hotel, and after the banquet an entertainment will be carried on in the same room to which all members of the Association are admitted and cordially invited. There may be other entertainments given on the same evening. These have not been thoroughly worked out, but will be announced in the daily bulletin.

There is still the golf association to be recorded, but that has been dilated on sufficiently, and more information may be had at the registration desk if it is not definitely understood beforehand. Some day during the week of the meeting, although not to interfere in any way with the scientific program, a drive about the city and surrounding country will be offered to the visitors.

Visiting members who desire to remain over the time limit set on their one-and-one half fare rate may have to content themselves with a tourist excursion ticket, which gives them all sorts of latitude and time. They may stay in various parts of Minnesota or the Dakotas and Montana. Doubtless a great many will come into the city by automobile, and they will find any number of places in which to store their cars.

The House of Delegates will meet on Monday, at the Nicollet Hotel, in the ballroom. After the committee on credentials have passed on the various delegates and their certificates, the House of Delegates will probably be called to order in the afternoon by the speaker, Dr. Frederick C. Warnshuis, of Grand Rapids, Michigan. Some very important problems are likely to come up before the House of Delegates this year, as various resolutions were introduced at the Washington meeting, and it will doubtless be a very interesting and important affair for the students of the constitution and by-laws. In a recent *American Medical Association Bulletin* Dr. Olin West, the Secretary, called attention to this matter and treated it in a very clean manner, and it was discussed at the recent meeting of the Secretaries of constituent State Associations held in Chicago last fall. There is an effort on foot, evidently, to get a uniform or as nearly a uniform constitution as possible so that the various State Associations may be able to cope with their domestic problems better than before.

The women will be entertained in a befitting manner. They will have opportunities for social teas and luncheons, as well as dinners, and will be given an opportunity to see Saint Paul and its surrounding territory, as well as the territory around Minneapolis.

We hope to have something more in the way of news or information in our issue of June first that will be perhaps more explanatory, or will have been better worked out at that time. In the meantime, the program has already appeared in the *Journal of the American Medical Association* of May twelfth, and the various important details are therein recorded.

MISCELLANY

MEMORIALS

Contributed by J. G. Lamont, M. D.

Within a few weeks the medical profession of North Dakota has lost three prominent members by death. Dr. E. M. Meadows, of Oakes; Dr. J. R. McKenzie, of Carrington; and Dr. F. R. Smyth, of Bismarck.

Dr. E. M. Meadows

Dr. Meadows was graduated from the Medical Department of Western University, London, Canada, in 1903, being a classmate of Dr. W. C. Fawcett, ex-president of the North Dakota State Medical Association. Since coming to the state he practiced at Oakes, was a much esteemed member of the Southern District Society, and had many friends in the State Association.

Dr. J. R. McKenzie

Dr. J. R. McKenzie died of carcinoma of the throat, at San Diego, California, on April 16. Also a Canadian graduate he came to Carrington in 1893 from Toronto University. He was active in his professional work until the fall of 1926, when ill-health forced retirement. During the World War he served in the medical corps of the American and Canadian Armies. His body was brought to Carrington and received a military burial, attended by members of the American Legion and Company F, National Guard. Dr. McKenzie was married in the earlier years of practice and is survived by his widow.

Dr. F. R. Smyth

Dr. F. R. Smyth, of Bismarck, one of the earliest physicians to locate in western North Dakota, died at a Bismarck hospital on Tuesday, April 24, after an acute illness of only a few hours. Although the doctor had been for about two years partially disabled by a form of paraplegia, his extraordinary mental vigor enabled him to continue his office practice.

Dr. Smyth was born in Scotland in 1852. After graduation in the medical colleges of Glasgow and London, he settled in Steele, North Dakota, in 1885, and later at Washburn, then a center of river traffic. He shared for years the burden of the pioneer settlers of Mercer and McLean Counties. After postgraduate education in the College of Physicians and Surgeons, Chicago, he moved to Bismarck, in 1893. Years of professional activity followed in which he served as local surgeon for the Northern Pacific, Penitentiary Surgeon, Health Officer for Burleigh County and the City of Bismarck, member of the State Board of Medical Examiners, and mayor of Bismarck in 1907. He was President of the State Medical Association in 1898, and during the World's War did important organization work as chairman of the Executive Committee of the State Council National Defense. He published many articles on public health topics, and a notable contribution to the *North Dakota University Quarterly*, in 1919, on "The Work of North Dakota's Physicians and Nurses."

Dr. Smyth fought fairly with hand and intellect whenever a great principle was at stake, rather enjoyed the fight. Truth, as he conceived it, could never be safely submerged. Ignorance, vice, and superstition are known equally to the old school and the new. Only methods change. Dr. Smyth kept pace with scientific improvement while still retaining the trained perception of the physician to whom a patient is a human subject rather than a group of diseased organs to be treated.

The doctor is survived by his widow and by several relatives in the British colonies and Scotland.

Celtic character, it is asserted, has mysticism, and the Scottish character the gift of premonition. Less than two years ago, at the Minot meeting of the North Dakota Association, Dr. Smyth spoke from a seat of honor at the right of the president. Physical disability did not prevent his making a hundred-mile trip from Bismarck to be present at the banquet, although he could not stand up to speak. Addressing the meeting cheerfully at some length, an aptly-fitting remark brought an ovation from the assembled guests, which lasted some moments. Returning to his subject the doctor was unable to proceed. Thoughts of many previous meetings, good fellowship in the profession, and a premonition doubtless of his life-work nearing its end—there occurred a few moments of impressively, eloquent silence, a spontaneous unpremeditated tribute from his listeners to a good man, a great friend whom the profession was pleased to honor.

Doctor Smyth was unable to attend the 1927 session, and his death is reported just a month before the date of the Devils Lake meeting.

Ten years prior to the publication of "Flanders Fields," Dr. John McCrae inscribed "The Pilgrims," a quotation of which seems not inappropriate here at the passing of three worthy members of his own chosen profession:

An uphill path, sun-gleams between the showers,
Where every beam that broke the leaden sky
Lit other hills with fairer ways than ours:
Some clustered graves where half our memories lie;
And one grim Shadow creeping ever nigh:
And this was life.

Wherein we did another's burden seek,
The tired feet we helped upon the road,
The hand we gave the weary and the weak,
The miles we lightened one another's load,
When, faint to falling, onward yet we strode:
This, too, was life.

Till, at the upland, as we turned to go
Amid fair meadows, dusky in the the night,
The mists fell back upon the road below;
Broke on our tired eyes the western light;
The very graves were for a moment bright:
And this was death.

Contributed by J. F. D. Cook, M.D.

DR. RODELL C. WARNE

Rodell C. Warne was born at Whitewater, Wis., June 25, 1864. His early education was acquired in the public schools at Whitewater, and in the normal school located at that place. He completed his college work at the University of Wisconsin, and was graduated as valedictorian of his class by Rush Medical College in 1887.

Dr. Warne began the practice of his profession in Whitewater, Wis., but two years later, in 1889, he moved to Mitchell, S. D., where he and his father entered the drug business, the doctor continuing his practice. He joined the State Medical Association at Mitchell, June 20, 1889, and was elected secretary of the Association the same year and served to June 13, 1894.

He served for three years in the national guard of Wisconsin, attaining the rank of second lieutenant; and at the breaking out of the Spanish-American War, in 1898, Governor Lee appointed him major and surgeon of the 1st S. D. Inf., U. S. Volunteers.

The major saw much hard service in the Philippine Islands. He was detailed on special duty as brigade surgeon in charge of the First Division Hospital at Cavite from September 10 to December 10, 1898, and was in charge of the hospital during the advance from Block-house No. 4 to San Fernando, in 1899.

After the war, he returned to Mitchell and took up the practice of his chosen profession which he continued successfully until he was stricken ill about four months ago.

In 1926 he was elected commander of the Department of South Dakota, United Spanish War Veterans.

Dr. R. C. Warne died at his residence in Mitchell S. D., on April 11, 1928, after a long illness, and was buried Sunday afternoon from the Methodist Episcopal church, with full miltary honors.

Dr. Warne's funeral brought out a large attendance of men from all over the state who had served with him in the Philippines in the old First South Dakota Regiment, and also many men of prominence. who had served in other regiments in the Spanish-American War.

Contributed by the Necrology Committee of the
Hennepin County Medical Society

DR. LOUIS DUNN

Louis Dunn was born in Kentucky, March 9, 1866, and obtained his education in the schools of that state preliminary to entering the Ohio Medical School from which he was graduated in 1887. In 1903 he took a course of postgraduate instruction under Wm. Osler.

He commenced the practice of medicine in Corinth, Ky., at the age of 21, later moving to New Paris, Ohio, and then to Minneapolis, where he lived for twenty-five years. He taught pathology at the Hamline University Medical School during his early years in Minneapolis. His interests were always along surgical lines, and he invented and placed on the market an outfit for the administration of local anesthesia, which bears his name.

Dr. Dunn was on the staff of Asbury Hospital and a member of the Hennepin County Medical Society. He has written a number of important papers on medical and surgical subjects and was in the midst of writing a sentence near the conclusion of a report on "Trauma of the Posterior Thoracic Nerve," when death occurred. This paper will be published posthumously. The major portion of his unusually excellent medical library will be presented to Asbury Hospital by his widow, who shared the doctor's interest in medical progress.

Although the deceased had undergone a serious illness two years ago he had apparently regained his former health, and was able to carry on his professional and literary activities with pleasure and enthusiasm.

His death occurred suddenly on April 21. He is survived by his widow, and by two sons, Marshall Dunn, of New York, and Dr. Halbert Dunn, of Baltimore.

The funeral services were conducted with dignity and simplicity in keeping with the doctor's previously expressed wishes. Members of the Hennepin County Medical Society officiated as pallbearers, and one of them, Dr. Geo. D. Haggard, delivered an appropriate biological sketch and appreciation of the deceased.

DR. CHARLES WESLEY BISHOP

Charles Wesley Bishop was born in Montreal, Canada, March 8, 1874, of Canadian parents. After his high-school course in Montreal he entered McGill University, from which he graduated in 1895.

He served his internship at Asbury Hospital in Minneapolis and after postgraduate work at the Manhattan Eye, Ear, Nose and Throat Hospital he began the practice of his specialty in Minneapolis.

He was a member of the St. Barnabas and the General Hospital Staffs and of the Hennepin County Medical Association.

He belonged to the Masonic Lodge and to the Hennepin Avenue Methodist Church.

His death occurred on April 30, and he is survived by one brother in Canada, one in California, a sister in Philadelphia and his wife, of Minneapolis.

NEWS ITEMS

Dr. K. W. Brimmer has moved from Volga, S. D., to Bruce, S. D.

Dr. Henry H. Blaustone has left for Philadelphia where he will be engaged in postgraduate work.

Dr. James Grassick, of Grand Forks, N. D., has returned from Los Angeles, Calif., where he spent the winter.

Dr. Carl Bauer, of Mandan, N. D., has returned from spending eight months in postgraduate work in Vienna.

Dr. Russell Yates, of Kenyon, Minn., has been appointed head of the x-ray department of the new Minot Clinic, of Minot, N. D.

The citizens of Crosby, N. D., have organized a hospital association to conduct a community hospital, which will be open to all doctors.

Dr. Herman Hawkins has moved from Helena, Mont., to Forsyth, Mont., to become associated with Dr. G. T. Haywood, of the latter city.

Dr. J. Ross Mackenzie, of Carrington, N. D., died last month in California. A memorial of Dr. Mackenzie will be found on another page.

Dr. C. N. Hensel and family, of St. Paul, have gone to Europe, and they will spend several months in Austria, returning to St. Paul about September 15.

The Sioux Valley Medical Association will hold its annual meeting in Sioux Falls, S. D., on June 27. An attractive program is in course of preparation.

Dr. A. N. J. Dolan, of the Veterans' Bureau, Helena, Mont., has been transferred to Portland, Ore. He is succeeded by Dr. John L. Gill, the present Chief of the Clinic of the Bureau.

Forsyth Deaconess Hospital, of Forsyth, Mont., has passed into the hands of Dr. H. J. Huene of that city, and its name has been changed to "Rosebud Memorial Hospital." It will be open to all regular physicians.

Dr. L. T. Lohbauer, of Lakota, N. D., and Dr. R. W. Van Houston, of Milwaukee, Wis., have purchased the equipment of the late Dr. E. M. Meadows, of Oakes, N. D., and will take over the offices and the practice of Dr. Meadows.

Dr. C. Eugene Riggs, of St. Paul, observed his seventy-fifth birthday last month, and a group of his friends invited him to dinner at the Minnesota Club, when they gave him a handsome loving-cup. Dr. Riggs began practice in St. Paul in 1881.

Work on the new unit of the Swedish Hospital of Minneapolis will begin in a couple of weeks. Although only four stories of this unit will be erected this spring, the plans call for a twelve story building to cover an entire block facing Elliott Park.

Dr. E. T. Thompson, who has been Assistant Superintendent of Ancker Hospital, St. Paul, for three years, has been appointed Administrator of the Indiana University Hospitals. He will be succeeded at Ancker Hospital by Dr. Magnus Davidson, who is a member of the Ancker Staff.

The Civic and Commerce Association, of Minneapolis, are planning for a hanging garden display on the lamp-posts of this city. So far the scheme has met the hearty co-operation of all down-town men except the doctors. The request of the Association should be given immediate attention by all physicians.

The Minnesota State Medical Association has planned to give the public, through the press, a full and dependable report of medical news. The work will be in the hands of committees of physicians throughout the state. The press of the state has given its unqualified editorial approval of the plans as evidenced by scores of newspaper clippings that have come to this office.

The following officers were elected by the Hennepin County Medical Society last week for 1929: President, Dr. N. O. Pearce; first vice-president, Dr. E. L. Gardner; second vice-president, Dr. A. E. McFarland; members of the executive committee, Drs. J. M. Hayes and Geo. D. Head; board of censors, Drs. J. F. Corbett and E. K. Greene; board of trustees, Drs. J. W. Bell and S. Marx White.

The new Northwest Clinic, of Minot, N. D., with a staff of ten physicians was opened to the public on Saturday of last week. The Clinic was organized and is controlled by Drs. A. R. Sorenson, A. L. Cameron, Andrew M. Carr, and Andrew Carr. Six other well-known physicians make up the staff, as follows: Drs. E. M. Ransom, Russell Gates, Paul Rowe, Cecil Watson, W. W. Swanson, and E. R. Samson.

The Sixth District Medical Society of North Dakota

The second meeting for 1928, of the Sixth District Medical Society, was held at Bismarck, N. D., April 12. The meeting convened at the Grand Pacific Hotel, where dinner was served at 7 P. M.

Immediately after the dinner the scientific program of the evening was given, with Dr. M. W. Roan, Chairman of the Entertainment Committee, in the chair.

The first subject presented was "Peptic Ulcer" by Dr. Andrew B. Rivers, of the Mayo Clinic, Rochester, Minn. Discussion followed by Doctors Arnson and Quain, of Bismarck.

The second subject was "Tumors and Lesions of the Labia, Cervix, and Vagina," by Dr. William H. Condit, of the Nicollet Clinic, Minneapolis, Minn. Discussion followed by Doctors Quain and Henderson, of Bismarck.

Following the presentation of these talks a motion was made and seconded to give the speakers a rising vote of thanks, for their excellent presentation of their subjects.

There were thirty-four members present and the following guests: Dr. And. B. Rivers, of Rochester, Minn.; Dr. Wm. H. Condit, of Minneapolis, Minn.; Major C. H. Lovewell, M. C., Fort Lincoln, N. D.; Captain John R. Oswalt, M.C., Ft. Lincoln, N. D.; Dr. L. H. Fredricks, Bismarck, N. D.; and Mr. Wm. S. Koller, of the State Health Laboratory, Bismarck, N. D.

The regular business meeting was then taken up with President R. W. Henderson in the chair. Minutes of the last meeting were read and approved as read.

Dr. R. B. Radl, of Hebron, N. D. was unanimously elected a member of the Society. The application of Dr. J. R. Ostfield, was presented to the Society and given to the censors to present for a vote at our next meeting.

W. L. Diven, M. D.
Secretary

American Psychiatric Association: Minneapolis Meeting

The Eighty-fourth Annual Meeting of the American Psychiatric Association is to be held June 4, 5, 6, 7, and 8, at the Hotel Radisson, Minneapolis, Minn. The sessions begin at 10:00 A. M. and 2:00 P. M. daily. The annual address is to be given by Professor Roscoe Pound, of the Harvard Law School, at 8:30 P. M., Wednesday, June 6, and is followed by the President's Reception.

Monday, June 4, is devoted to the section on Convulsive Disorders. Tuesday, June 5, is given over to general sessions including Convulsive Disorders and Mental Hygiene. Dr. Wm. J. Mayo, of Rochester, and Dr. C. Eugene Riggs, of St. Paul, will give the address of welcome, Tuesday morning. Wednesday, June 6, is reserved for papers on Pathology. Thursday morning, June 7, is for Clinical Psychiatry, and the afternoon session is shared with the American Psychoanalytic Association on Psychoanalysis. Round Table Conferences are to be held in the evening of Thursday. The final session on Friday morning, June 8, is held in conjunction with the American Psychopathological Association on Psychopathology.

Sessions are open to those professionally interested. Sight-seeing and shopping tours, a complimentary luncheon, and general entertainment are to be arranged for ladies accompanying members.

A one and one-half fare railroad rate has been granted on condition that two hundred fifty members and dependent relatives attend the meeting and obtain certificates. A ticket at regular one-way tariff fare to Minneapolis must be obtained from May 31 to June 6 inclusive. When tickets are purchased one must get a certificate (not a receipt.)

Yankton District Medical Society of South Dakota

The Spring meeting of the Yankton District Medical Society was held in the Rotary Room, Hotel Yankton, Tuesday, April 24. The following program was presented:

Pernicious Anemia. By Dr. H. Milton Conner, Rochester, Minn.

Report of Cases Relative to the Present Epidemic. By Dr. F. A. Moore, Yankton, S. D.

Diathermy as an Aid in the Treatment of Compound Fractures. By Dr. E. M. Stansbury, Vermillion, S. D.

Review of Medical Ethics. By Dr. J. P. Isaac, Freeman, S. D.

There was an attendance of thirty-eight physicians including fourteen senior medical students of Vermillion.

Upon vote of the Society it was decided that hereafter the spring meeting would be held at Vermillion under the auspices of the Medical School of the University. This request came from Doctor G. R. Albertson, Dean of the school. In the discussion of the subject of holding at least one meeting at Vermillion, it was indicated that it would be a good thing for the members of the district to keep in touch with the work of our medical school and with this in view, a portion, at least, of the program of this meeting would be presented by some member or members of the medical faculty.

The meeting proved to be a very interesting one, adjourning about eleven P. M.

J. A. Hohf, M.D.
Secretary

The American Association for the Study of Goiter

The American Association for the Study of Goiter, consisting of internists, pathologists, radiologists, etc., as well as surgeons, will hold their fifth annual conference on goiter, in Denver, Colorado, June 18, 19, and 20.

Several men from foreign countries have signified their intention of attending. Professor Breitner, of the Von Eiselberg Clinic, Vienna, and Professor Albert Kocher, of Berne, Switzerland, have accepted places upon the program.

Addresses and discussions on prophylaxis, medical treatment, endemic goiter and cretinism from the public health standpoint, are on the program for the first afternoon.

Pathology, various phases of surgical treatment, etc., will be considered the last two afternoons.

All members of State Medical Societies are invited to attend.

Dr. Gordon S. Fahrni, of Winnipeg, Canada, is the president and Dr. Kerwin Kinard, of Kansas City, is vice-president.

Minnesota Medical Alumni Homecoming Banquet

Minnesota medical alumni from twenty-one states will reunite in Minneapolis, Wednesday, June 13, at the Minnesota Medical Alumni Association banquet, to be held at the Nicollet hotel at 6:30 P. M.

This is the first large reunion of Minnesota "medics" ever held, and every class since '89 is represented among the 600 reservations already made with the central committee on arrangements for the Homecoming, which will also mark the 25th anniversary of the class of 1903.

Elaborate entertainment is being planned for the returning "grads," including a golf tournament to be staged at the Woodhill Country Club, beginning at 12:30, the day of the homecoming.

All members attending the American Medical Association meeting in Minneapolis, June 11-15, will be invited to attend the entertainment following the banquet—the "Medical Midnight Revelry." Graduating medical students at the University will also be guests of honor at the dinner, as will many former professors, including "Charlie" Erdman, "Dickey" Beard, "Tommy" Lee, Dean Lyon, William Watts Folwell, J. W. Bell, and President Coffman.

Special invitations to the Homecoming have been sent out to all alumni by President Coffman, Dean Lyon, E. B. Pierce, the central committee, and University fraternities.

Dr. Oswald Wyatt, president of the Minnesota Medical Alumni Association, will preside at the banquet; Johnny McGovern, Minnesota All-American, will be master of ceremonies, and ("Doc") L. J. Cooke, toastmaster.

Special entertainment for visiting women will be provided by Dr. Cecile R. Moriarty.

Members of the Homecoming committee include: Dr. N. O. Pearce, Chairman; Drs. Edwin L. Gardner, Arthur L. Herman, William H. Aurand, William A. O'Brien, Oswald S. Wyatt, John Eldon Hynes, Don H. Daniel, W. Ray Shannon, Claude Ehrenberg, Andrew Sivertsen, Henry E. Michelson, Reuben A. Johnson, Fred A. Erb, Kenneth Allen Phelps, Dale Turncliff, James Martin Hayes, Fred H. Poppe, Cecile R. Moriarty, E. B. Pierce, and Paul Johnson.

Northwestern District Medical Society of North Dakota

The regular monthly meeting of the Society was held at the Trinity Hospital, Minot, on April 25. Dinner was served by the hospital at 6:15.

Sixteen members were present.

A committee was appointed to attempt to secure a speaker on the subject of Medical Education and Publicity, at the next meeting in May.

Clinical cases were presented as follows:

By Dr. Sorenson:
A case of Perthe's disease.
By Dr. A. M. Carr:
(1) A case of meningitis secondary to otitis.
(2) A case of mastoiditis.
By Dr. McCannel:
A case of albuminuric retinitis.
By Dr. Cameron:
A case of tuberculosis of the spine.

Andrew Sinamark, M.D.
Secretary

Assistant Wanted

In a large general practice. Apply to W. C. Fawcett, M.D., Starkweather, N. D.

Locum Tenens Work Wanted

By an experienced physician who is competent and willing to work. Address 476, care of this office.

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I desire to buy a small hospital or a sanatorium in the Park Region of Minnesota. Address 478, care of this office.

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North Dakota practice for sale. Annual cash income $12,000. For sale by administrator. Address 473, care of this office.

Position Wanted by Laboratory Technician

Can do all work required of a technician in hospital or clinic, except Wassermanns. Highest testimonial given. Address 471, care of this office.

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A young physician wanted to do locum tenens work in a hospital, in Minnesota, for a few months. Position may become permanent. Address 474, care of this office.

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A German-speaking eye, ear, nose, and throat specialist to head Department in a North Dakota

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Opening in Minnesota for Young Man

Have fine location for young Scandinavian or German physician and surgeon either as assistant or partner. Might even sell out as age begins to weigh on me. Have unusually well equipped offices and a small hospital with modern equipment in connection with offices. Address 475, care of this office.

REPORT MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

JANUARY, 1928

BY EXAMINATION

Name	School and Date of Graduation	Address
Beuning, John Bernard	Univ. of Minn., M.B., 1927	Freeport, Minn.
Cutts, Rollin E.	Univ. of Minn., M.B., 1927	General Hospital, Minneapolis, Minn.
Duncan, Geo. Radcliffe	Univ. of Minn., M.B., 1927	482 Laurel Ave., St. Paul, Minn.
Hansen, Rorbye	Univ. of Minn., M.B., 1927	Miller Hospital, St. Paul. Minn.
Harrison, Percy Willard	Univ. of Minn., M.B., 1927	1991 Laurel Ave., St. Paul, Minn.
Hendrickson, Russell Rob.	Univ. of Minn., M.B., 1927	St. Mary's Hospital, Duluth, Minn.
Hiemstra, Wybren	Univ. of Minn., M.B., 1927	General Hospital, Minneapolis, Minn.
Johnson, Orville Henry	Univ. of Minn., M.B., 1927	717 Erie St. S. E., Minneapolis, Minn.
Lynde, Orrin G.	Univ. of Minn., M.B., 1927	General Hospital, Minneapolis, Minn.
McCarty, Ray Bardwell	Univ. of Pa., M.D., 1925	Rochester, Minn.
Mosby, Maurice Edward	Univ. of Minn., M.B., 1927	507 Holly Ave., St. Paul, Minn.
Nesbit, Mark Edwin	Univ. of Pa., M.D., 1926	Mayo Clinic, Rochester, Minn.
Peeke, Alonzo Provost	Univ. of Minn., M.B., 1927	Lowry, Minn.
Pfeffer, Theodore John	Univ. of Iowa, M.D., 1926	Mayo Clinic, Rochester, Minn.
Rud, Norman E.	Univ. of Minn., M.B., 1927	Northwestern Hospital, Mpls., Minn.
Scherer, Leslie Raymond	Univ. of Minn., M.B., 1927	General Hospital, Minneapolis, Minn.
Siemsen, Walter J.	Univ. of Iowa, M.D., 1926	505 Ontario St., Minneapolis, Minn.
Smith, Wallace Russell	Univ. of Minn., M.B., 1927	University Hospital, Mpls., Minn.
Soine, Tyler Sylvester	Univ. of Minn., M.B., 1927	Swedish Hospital, Minneapolis, Minn.
Steward, John Alexander	Univ. of Pa., M.D., 1926	Mayo Clinic, Rochester, Minn.
Stoeckmann, Arthur Edward	Univ. of Minn., M.B., 1927	General Hospital, Minneapolis, Minn.
Truog, Clarence P.	Univ. of Minn., M.B., 1927	General Hospital, Minneapolis, Minn.
Whitson, George Elliott	Univ. of Minn., M.B., 1927	University Hospital, Mpls., Minn.
Whitson, Sidney Albert	Univ. of Minn., M.B., 1927	University Hospital, Mpls., Minn.

BY RECIPROCITY

Berkman, John Mayo	Univ. of Iowa, M.D., 1926	514 7th Ave. S. W., Rochester, Minn.
Boesel, Reuben Jacob	Univ. of Ohio, M.D., 1921	Rochester, Minn.
Bruner, Julian Minassian	Rush, M.D., 1927	Mayo Clinic, Rochester, Minn.
Fricke, Robert Elmer	Johns Hopkins, M.D., 1920	Mayo Clinic, Rochester, Minn.
Hurt, Algernon Smith, Jr.	Univ. of Va., M.D., 1926	723 3rd St. N. W., Rochester, Minn.
Koenigsberger, Charles	Univ. of Mich., M.D., 1910	Mankato Clinic, Mankato, Minn.
Loughery, Harold Barker	Univ. of Ill., M.D., 1922	Mayo Clinic, Rochester, Minn.
McKenna, Maurice J.	Univ. of Iowa, M.D., 1925	Graceville, Minn.
Petersen, Magnus Christian	Univ. of Neb., M.D., 1925	St. Peter, Minn.

CREDENTIALS NATIONAL BOARD

Mackay, Roland Parks	Univ. of Toronto, M.B., 1925	Mayo Clinic, Rochester, Minn.
Margolis, Harry Maurice	Univ. of Pittsburgh, M.D., 1925	412 3rd Ave. S. W., Rochester, Minn.
Spannuth, John Roy	Univ. of Pa., M.D., 1926	Mayo Clinic, Rochester, Minn.

THE
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HOW PHYSICIANS CAN HELP THE INCREASING TREND OF PROFESSIONAL PHARMACY AWAY FROM COMMERCIALISM*

By FREDERICK J. WULLING
Professor of Pharmacology and Dean of the Faculty of the College of Pharmacy, University of Minnesota
MINNEAPOLIS, MINNESOTA

After I had given six of the series of twelve radio talks which I am broadcasting over station WLB, the University station and known as the "Voice of the Campus", one letter among the many letters that my hearers sent me inquired whether pharmacy had an association comparable with the American Medical Association insofar as the latter represents the totality of interests of the medical profession, and if pharmacy had no comparable organization, in what manner it was organized. That suggested to me to draw a certain comparison between organized medicine and organized pharmacy, and I think it will be entirely consistent for me to tell you this evening something about the organizations of pharmacy for the purpose of laying a foundation for what I will say later about the improvement in purely professional pharmaceutical service that now can be found by those who look for it, contrary to the belief of so many that professional pharmacy has surrendered to commercialism.

Pharmaceutical activities are so much more numerous and diversified than medical practice is that so far pharmacy has not been able to unify itself in such a way that a single association could adequately represent all of its activities and aims and purposes. In the practice of medicine there is much more cohesion and less diversity and also a more pronouncedly professional spirit and a more general and unified adherence to professional ideals, while lately in pharmacy the professional practice is diluted and attenuated with other activities, especially commerce. In medicine the practitioners of the various medical and surgical fields all are engaged exclusively in giving a professional service. In pharmacy the service ideal is paramount and ranks first, but there is a secondary activity not found in medicine, namely, the engagement in commerce, which activity is motivated by the desire or in certain cases the necessity for greater material gain than it is thought can be gotten from professional practice alone. Professional practice and trade activities are not compatible in the long run, probably because they are based upon different ideals: the professional upon the service motive and the commercial upon the gain motive. Both motives are of course entirely respectable and good, but followed concurrently by one person the one or the other of the motives must be relegated to second place. That is why some pharmacists who adhere to the ideals of professional practice do not succeed commercially and why many of those pharmacists who are commercially inclined are unsuccessful professionally. This explains also why there is, in the ranks of retail pharmacy especially, a diversity of interests, which the past experience of older countries, and already in a large measure of our own country, has proven incompatible and futile as far as permanence of the dual activity is concerned. Pharmacy was at first entirely professional and when the commercial invasion began years ago, the professional and commercial ideals at once conflicted and this conflict has increased with the acceleration of the commercial exploitation of professional pharmacy. Despite every possible endeavor on the part of the leaders in pharmacy to harmonize the two interests, there is a distinct disinclination on part of both the professional and commercial pharmacists to surrender one to the other. This situation is gradually solving itself by the withdrawal of many professionally-minded pharmacists who are establishing themselves for purely professional practice. When this withdrawal will have gone far enough, there will probably have become established at the same time a class of merchants who will deal in the merchandise now carried in so many drug stores but who will not be registered pharmacists under the jurisdiction and regulation of the state.

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*Presented before the Hennepin County Medical Society, February 6, 1928.

All this explains why the pharmacy of this country is not represented by a single association as medicine is represented by the American Medical Association. If pharmacy were practiced in a purely professional way, one association could represent it. That association would be the American Pharmaceutical Association, and in that respect it would be comparable with the American Medical Association.

AMERICAN PHARMACEUTICAL ASSOCIATION

The Association most like the American Medical Association and based upon identical ideals of service is the American Pharmaceutical Association, the oldest association of its kind and which celebrated its diamond jubilee at its seventy-fifth annual meeting at St. Louis last August. When the Association was organized, pharmacy was entirely professional in its practice. It was recognized then more than it is today that pharmacy as the chief medical specialty was an essentially medical practice differing only from purely medical practice by the fact that the pharmaceutical professional service involved the material items known as drugs and medicines and which naturally were the subjects of buying and selling. The pharmacist differed from the physician therefore, in the respect that he gave a service and a commodity whereas the first gave only a service. The pharmacists had to engage in buying and selling, but this commerce was restricted to drugs and medicines. They bought the crude drugs and compounded them into medicines which the physician prescribed. The pharmacists in those days were well trained professionally because pharmaceutical study and practice occupied their full time and interest. They controlled pharmaceutical education, but there was no control over the practice of pharmacy nor of the quality of crude drugs and pharmaceutical chemicals. It was for the purpose of remedying this situation and of improving pharmaceutical standards that the high-minded pharmacists more than one hundred years ago began to make efforts for a suitable national organization through which their influence and ideals might find expression. After many years of discussion and preparation, the American Pharmaceutical Association was finally organized in 1852. Then and for many years afterward it was comparable in its ideals to the American Medical Association. The Association has a most honorable history, and it records the names in its list of past presidents and other important officers, of men famous not alone in their own country but in all countries. It would require several talks to acquaint you adequately and in detail with the successes and achievements of this grand old American Pharmaceutical Association.

When the American Pharmaceutical Association was first established all who were in any way definitely related to pharmacy were eligible to membership, but the earliest membership included practically only retail and wholesale pharmacists and only a very few pharmaceutical and chemical manufacturers because the manufacture of medicinal preparations had not yet been entered upon in a large scale. The purpose of the Association, however, was to represent all divisions of pharmacy, and it did so most successfully. It did noteworthy work in the matter of pharmaceutical education and helped very materially in the later establishment of state and local associations through which it exercised much affirmative influence in the shaping of state and national pharmaceutical legislation. It should be said here that all pharmaceutical legislation has always been in the interest of the public and never primarily in the interests of the pharmacists.

The insinuation of trade into the practice of pharmacy began many years after the organization of the American Pharmaceutical Association. It was hardly perceptible when it first began, but the exploitation by trade of the honored profession of pharmacy gradually increased until, through the acceleration of the past two decades especially, it has now grown to the points which have already caused the reaction I have described. At a certain point of the development of commerce in the drug store, many pharmacists began to feel that the American Pharmaceutical Association was not representing the commercial interests sufficiently, and since the Association showed no disposition to change its policy of representing primarily professional pharmacy, a group of pharmacists organized a new national association to represent the trade aspect of retail pharmacy. The new association was called the National Association of Retail Druggists.

NATIONAL ASSOCIATION OF RETAIL DRUGGISTS

It is quite true that the increase of trade activities in the drug-store created many new problems. Indeed, I do not hesitate to repeat what I have often said, that practically all of the present vexing problems of pharmacy are growing out of the business development of the average store. The new Association did some splendid work in administering upon the new problems. It represented the commercial section of pharmacy and as such gave pharmacy a good service. It did not attempt to lessen the commercial activities and chain stores, whose activities are mostly commercial, and which had grown throughout the country in formidable numbers.

The American Pharmaceutical Association and the National Association of Retail Druggists have therefore represented, not identical interests, but interests that are in a measure opposed to one another. Yet they have both striven in the interests of pharmaceutical activities. They have worked harmoniously and concurrently in their respective fields but have resisted the occasional attemps to merge them into one association. They probably never will merge because their interests and purposes are not identical nor sufficiently related and sympathetic.

AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY

It would take too long to explain the old apprenticeship system of instruction in pharmacy. Suffice it to say that something over a hundred years ago it was gradually abandoned and its place taken by the collective college instruction method and that colleges of pharmacy began springing up, the first in Philadelphia in 1821, the second in New York in 1829, and the third in Boston in 1935.* Then a time arrived when the number of colleges had reached the point where conferences of their faculties became necessary because of the short courses and low standards of some of them, and accordingly in 1900 the representative colleges of pharmacy organized themselves into the American Conference of Pharmaceutical Faculties. The initiative toward this organization came from the American Pharmaceutical Association, which had already established a Section on Education, through which it did the preliminary work necessary for the organization of the Conference.

The Conference afforded a means for the exchange of ideas on pharmaceutical education and for ventilating opposing ideas and viewpoints, and in this manner gradually increased the pharmaceutical educational college requirement from none at all to high school graduation. The Conference, of course, had no binding and compelling influence upon its member colleges, and when the proposal to increase the minimum college requirements to three years was presented for adoption, so many members objected and refused to comply that it was found necessary to change the Conference into an association with a measure of controlling power over the colleges. Accordingly, two years ago the American Association of Colleges of Pharmacy became the successor of the American Conference of Pharmaceutical Faculties. The Association stands for high pharmaceutical educational standards and is requiring its members to give a minimum course of three years. Four or five colleges resigned at the time because they did not feel that they could meet the new requirements, but they have since announced their compliance, to begin very shortly. As a result of the stiffening of the educational requirements through the work and influence of the Association, some colleges have gone upon a minimum four-year degree basis. The University of Minnesota College of Pharmacy was the first to do this upon its own initiative. The Association is in close co-operation with the American Pharmaceutical Association and annually holds joint meetings with the Section on Education and Legislation of the latter Association.

NATIONAL ASSOCIATION OF BOARDS OF PHARMACY

Concurrently with the development of pharmaceutical education improvement became necessary in the regulation of the practice of pharmacy, and the several states created boards of pharmacy for that purpose. The principal function of the boards is to regulate the practice of pharmacy. Regulation includes the requirement of a minimum of education and training. At this point the boards and the colleges contacted.

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*Some records give 1823 as the Boston date.

The requirements of many of the boards were as low comparatively as the requirements of some of the colleges and the low-standard boards and the high-standard colleges came into conflict. The colleges, however, had through the national Conference harmonized their standards somewhat and through their influence the several state boards gradually became converted to the need of more uniform requirements for registration, examination, and license, and so the boards, at least the leading ones, organized themselves only recently into the National Association of State Boards of Pharmacy. It is the principal purpose of this new National Association to harmonize and unify and raise in a concerted and collective manner the standards of the separate state boards. This association has already accomplished wonderful results. It is co-operating splendidly with the colleges and with the American Pharmaceutical Association and with the National Association of Retail Druggists. These associations are co-operating in all interests that are common to them all and so are strengthening and invigorating one another. These four associations have many matters in common and upon the administration of these there is already a unanimity and some achievement. All of these associations, except the National Association of Retail Druggists, hold joint meetings at which they discuss and ventilate matters of mutual interest and concern and where, through contact and association, that good understanding and good will which are necessary for mutual advancement are abundantly generated.

OTHER NATIONAL ORGANIZATIONS IN THE FIELDS OF PHARMACY

There are a number of other national associations representing other divisions of pharmacy. The National Wholesale Druggists' Association represents the wholesale and jobbing aspects of pharmacy. This is an association of honorable endeavor and achievement and has exerted a very beneficial influence in wholesale pharmacy since 1882 in which year it was organized. It became the successor of the Western Wholesale Druggists' Association which was organized in 1876. The relation between the National Wholesale Druggists' Association and the American Pharmaceutical Association has always been especially amicable and mutually helpful.

The National Association of Manufacturers of Medicinal Products is an association which has been in existence since about 1912. The membership is made up, as its title indicates, of manufacturers of medicinal products banded together for mutual advancement and protection. This Association, too, has been working forward in the interests of generally higher pharmaceutical standards.

The National Drug Trade Conferences has been in existence for a number of years and has contributed its share to the development of pharmacy.

In close association with the American Association of Colleges of Pharmacy a number of seminars have been organized for the stimulation of research, but particularly for the exchange of ideas among the members of the several groups represented by the seminars. These groups are made up from all sections of the country and are therefore national in character. The first of these seminars was the Plant-Science Seminar, organized by Dr. E. L. Newcomb of the faculty of the College of Pharmacy, University of Minnesota. The first two conferences were held at the University of Minnesota and because of their signal success the organization of other seminars followed and there are now seminars covering the educational fields of pharmaceutical chemistry, pharmaceutical education, plant-science and general pharmacy. The fields of pharmaceutical botony, materia medica, pharmacognosy, drug plant culture, etc., are included in the Plant-Science Seminar.

There is also a national association covering the manufacture of proprietaries and especially the so-called patent medicines and a Druggists' Research Bureau which is national in character relating to the business aspect of pharmacy, while a Pharmaceutical Research Council concerns itself exclusively with scientific research.

STATE PHARMACEUTICAL ASSOCIATIONS

Out of the activities of the American Pharmaceutical Association there grew, as I have already stated, the various national associations just enumerated. The American Pharmaceutical Association was also and primarily instrumental in bringing about the organization of the earlier state associations. Now practically every state has its pharmaceutical associations.

To enumerate the activities and achievements of the state associations would require much more time than is at my disposal, but suffice it to say that they all have had more or less of the pharmaceutical professional spirit. Indeed, every one of them was originally based upon a purely professional and ethical conception of the practice of pharmacy. With the advent of commercialism in pharmacy, the state associations had to suffer the onslaught of ultra-commercialists, but practically all of them are still holding to their original ideas as much as is possible under the commercial stress of the times.

The Minnesota State Pharmaceutical Association was organized in 1884 by a group of high-minded and high-standard pharmacists for two purposes: first, to obtain a state law to regulate the practice of pharmacy; and, second, to have a college of pharmacy organized as one of the units of the State University. These two primary objects were soon accomplished and then the Association directed its activities toward higher and higher standards. The forty-three annual volumes of Proceedings which it has so far published are a record of an achievement which is not exceeded elsewhere in quality, scope, and worthwhileness. The Minnesota State Pharmaceutical Association is looked upon as one of the most forward and most professionally-minded of the state associations.

In Minnesota there is in addition to the state association and local associations in Minneapolis, St. Paul, Duluth, the Iron Range, and in some counties, a new association called the Minnesota Pharmaceutical Educational Conference whose membership is made up of the entire State Board of Pharmacy, the executive faculty of the College of Pharmacy of the University of Minnesota, and the Education Committee of the Minnesota State Pharmaceutical Association. The Conference, therefore, represents the three major pharmaceutical factors in the state and whose co-operation and forward work in respects and interests common to the three express themselves through the Conference. The Conference is doing some splendid work.

LOCAL PHARMACEUTICAL ASSOCIATIONS

All of the large centers of population and some counties have their local associations. Some of these have been and are very influential. A number of them, notably those of Philadelphia, New York, Boston, St. Louis, Brooklyn, Louisville, and Cincinnati created colleges of pharmacy in their respective cities through which they did much affirmative work in the interests of better pharmaceutical training.

At present there is a tendency toward district associations in which the pharmacists of districts or sections, usually larger than states, meet for the discussion of matters of mutual concern.

A form of pharmaceutical organization of recent origin is the Veteran Druggists' Association, the first of which belongs to the city of Chicago. Because of the example and influence of the Chicago association, more particularly through the work and endeavor of Mr. Wilhelm Bodemann, the inspirer of the Chicago veterans, similar associations have been formed in many other cities, such as New York, Buffalo, Minneapolis, St. Paul, Cincinnati, and the State of South Dakota. A number of other cities are contemplating similar associations.

These veteran pharmacists are men of maturity, experience, action and good common sense. While the chief aim is to create good fellowship and sociability and to uphold high practitional standards, some of them, our own Minneapolis association anyway, cannot resist the demand for participation in or support of the most worthwhile pharmaceutical activities. These associations are one of the most potent influences for better pharmacy that exist today.

I have given you all of this information to bring to your mind and to emphasize that there is a very substantial educational foundation and a very strong, extensive, and efficient pharmaceutical structure upon which purely pharmaceutical professional service is based. This structure exists, although it may be hidden by the bright lights and the more or less commercial aspect and atmosphere of the average drug store. No one will deny that pharmacy gives a much needed service. That service is of course rendered in the average drug store in too large a measure as a service bringing less financial return than commercial service brings and therefore is with many merchant-pharmacists of secondary importance. The relegation of pharmaceutical practice to second place in many of the average drug stores has resulted in an increasing negligence of pharmaceutical practice and therefore to a distinct waning of professional efficiency which in turn very naturally has decreased the confidence of the public and of the physicians in the ultracommercial pharmacists and in their establishments. In the proportion in which emphasis is placed upon trade in the average drug store, the professional activity recedes more and more into the background. Indeed, there are many instances where the recession continued to a point of entire disappearance of any pharmaceutical practice, resulting in commercial establishments which were first referred to as "drugless drug stores." Commerce seems to be more remunerative than professional practice of any kind and so the number of so-called "drugless drug stores" increased by the incursions of the wholly commercially-minded persons who deliberately established drugless drug stores. There are, therefore, two kinds of druglesss drug stores—those which evolved from professional establishments, and those which sprang into existence over night. These retail stores could not avoid the charge of exploiting the old honorable profession of pharmacy, and as a result they are now prohibited by law from using the word "drug" in any designation or reference to their business.

The diminution of professional practice in many drug stores has not yet reached the point where entire elimination is near at hand, and some of the more professionally-minded pharmacists are trying to rehabilitate their professional practice and in other cases they are making strenuous efforts to maintain such professional practices as they still have. Pharmacists of this kind are entitled to the sympathy and support of the public and of physicians. They are the kind who are resisting as much as they can the onslaught of commerce and the competition of those other so-called pharmacists who care nothing whatever for professional practice, even belittling it and using every possible high-pressure system of doing business rather than practicing pharmacy.

However, a very healthy indication of better things for pharmacy grows out of the fact that many professional pharmacists have resolutely and courageously withdrawn from the dual practice of the average drug store and have established themselves as purely professional pharmacists. Such practitioners are now found in every city and their number is increasing. They are getting the patronage of that part of the public which is discriminating enough to want so responsible a service as pharmaceutical service is, rendered by practitioners who make of pharmacy a specialty instead of a secondary and neglected side issue. These new establishments are the ones which can render a professional service not only to the public but to the physician. They and the professionally-minded pharmacists who are earnestly engaged in rehabilitating or maintaining their professional practice, are competent allies of the physician and many of them have initiated relations with physicians that are not only mutually helpful and advantageous but that also redound to the special benefit of the sick. Physicians and pharmacists should be allies. Some of them are; all of them can be if they will co-operate and exercise good will toward one another. The medical profession is not holier than the pharmaceutical: it is accountable for some sins. It is, of course, not my purpose to designate in detail what these are, but I know you will pardon me if I say that altogether too many physicians prescribe patent medicines and needless proprietaries and fail to formulate their prescriptions. There are among my personal acquaintances physicians whose materia medica is largely based upon the circular information of manufacturers rather than upon the United States Pharmacopeia. Such could greatly help themselves by consulting with pharmacists. But, after all, when the worst has been said about pharmacy and medicine, it must be recognized that the stains upon these two great professions are, quantitatively and qualitatively, almost insignificant and certainly eradicable and remediable. Wholehearted adherence to the highest pharmaceutical ideals and practice of pharmacy in its most ethical and professional aspects are the ideals fostered by associated pharmacy and especially by the American Pharmaceutical Association, the American Association of Colleges of Pharmacy, and the National Association of State Boards of Pharmacy, which together express pharmaceutical ideals comparable with the ideals represented by the American Medical Association.

In conclusion let me say that physicians can greatly help the professionally-minded pharmacists and themselves by careful selection of the pharmacists who dispense their prescriptions. I certainly do not mean to say that there are registered pharmacists who are not qualified to prepare medicines and compound prescriptions, but I do not hesitate to maintain that physicians and the public have a reason and a right to discriminate. The measure in which physicians will increase their information and their knowledge of pharmacology, and especially of materia medica and posology; and in the measure in which they will formulate their prescriptions, and in which formulation competent pharmacists can and are willing to be very helpful, physicians will not only help themselves and their patients, but they will help to restore much of the confidence which some of the purely professional pharmacists have lost in a respectable proportion of the medical profession. Physicians should not condemn pharmacy in the wholesale way in which some of them do, because pharmacy is much more highly developed and much more professional to-day than it ever has been, but it must be looked upon in the right light and not in the light and glare and ostentation of the modern ultra-commercial drug store. There are still some drug stores of today in which the physician can have full reliance and confidence. He may have to look a little more closely and discriminatingly.

MEDICAL ECONOMICS*

By John W. Bell, M.D.
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MINNEAPOLIS, MINNESOTA

Medical Economics may be defined as the art of managing in a systematic manner the business affairs of the physician—an all-important part of the art of medicine. The physician should keep constantly in mind the fact that, in the practice of medicine, more men fail from ignorance of the art of medicine than from ignorance of the science of medicine, colossal as the latter may be.

A professional life may be likened to a road or highway, and success its destination. He who keeps on the highway and follows the road signs usually avoids the bumps and saves worry and expense.

The young physician should realize that the conditions confronting him on leaving college and beginning practice are very different from those in college and hospital, where he asks and is given, seeks and finds. The practice of medicine is very different from the theory of medicine. The medical practitioner must learn how to meet people and how to make friends. He must give attention to book-keeping, matters of finance, and all the other annoying details connected with the practice of medicine. Bradstreet claims that 86 per cent of all failures result from causes originating in the individual. Therefore, you will please remember that your clinical, dispensary, hospital, and even your intern experience fail to prepare you to meet the requirements of private practice, in at least one important respect. You had no special personal interest in the charity patient aside from his illness. If the patient recovered, he made room for another patient; if he died no explanation was required.

In dealing with the private patient you must convince him and his relatives of your personal interest in his recovery. This will require personality in the form of tact, gentleness, sympathy, and firmness of purpose. In the language of the day and period, you must sell yourself to your patient and his relatives, at least to the extent of securing their confidence and co-operation.

Medicine has for its prime object the service it can render humanity, but the physician must live in order to render this service. The application of business principles to a profession does not constitute commercialism. The young physician should strive to start right. He should give most careful considerattion to the question of location. In so doing he should beware of entangling alliances, and, as a rule, avoid partnership with other physicians.

Do you desire to locate in a city, town, or village? If you favor a city, avoid the city with a medical college unless you desire a position in the college. In selecting your city or town, choose one with a healthy growth—the most money per capita and the fewest physicians—preferably a town in the West or South. Your next problem is your office and its essentials. Select a corner in the business or shopping district. If you decide in favor of a home office, have a separate entrance and exit. Avoid frequent changes—a move means the loss of 15 to 20 per cent of your practice. Have your office easy to find and accessible.

The magnitude of your office and its equipment will depend somewhat on your final decision as to location—village, town, or city; also on the state of your finances. You should have a comfortable, cheerful waiting room, and a light, airy, consulting room with two doors, one for entrance and one for exit of patients If able, have a small second room, and a suitable screen in the large room. In selecting your office outfit let the articles of furniture be, at first, few in number, but of good quality. Have comfortable chairs for your patients. Have a mirror, and on the table have a few late periodicals. Keep the temperature of the room suited to the season. As your income increases gradually add to your office equipment as your line of practice demands. It is your duty, as well as to your interest, to avoid in your office a display of political or religious emblems.

Having decided on your location, arrange at once with the local telephone company for the listing of your name and number. It often requires weeks and months before your name appears in the telephone directory.

For the first few months you will find it much less expensive to hire an auto for your few hurried calls than to own one. The average car will cost you from four to five hundred dollars a year to maintain. For country work you will require a closed car. Arrange to have your garage near your residence.

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*Address presented to the Senior Medical Students of the University of Minnesota, Medical Department, February 28, 1928.

Your text-books will form the nucleus of your library, including a good general dictionary and the latest medical dictionary, also the *Journal of the American Medical Association,* and others as required by your line of practice.

You will require a medical bag of some description, and the Chicago Medical Bag, or a similar one, will be found most satisfactory for the general practitioner. However, in the city a much smaller one will answer every purpose.

You have one great problem to solve, as does the young attorney. It consists in meeting people and making friends of them. You should be careful, at first, to select individuals whom you can meet on an absolute equality. You should make it your especial business to know about people you meet—their social, religious, political, and financial interests. In order to serve the people of your community well you must know about them. A physician is a public personage, and should manifest an interest in the community. He should take an active part in civic affairs, and become a member of the more important commercial organizations and clubs. This does not mean that you are to solicit patients, but that you are to mingle with the people and take part in the civic affairs of your community, and not presume that you occupy a pedestal and must be sought and worshipped.

The physician who works hardest is not always the one who accomplishes most. The hurried man is like a squirrel in a revolving cage—he goes round and round, but never arrives anywhere. Develop a workable system and make every moment and movement count.

Study the people in your community and adjust yourself accordingly. Remember that success or failure is largely a personal matter and will depend on your personality—an intangible element consisting of sincerity, integrity, loyalty, confidence, and good nature. Avoid office idlers, men or women;—patients much prefer to confer directly with you or your office assistant. Select your office attendant with care, and avoid change. A physician is judged by the company he keeps, hence do not associate with aimless idlers. Let your associations be with your professional brethren and other people of genuine worth.

Have regular office hours and keep them as promptly as your work will permit. Educate your patients to send for you in the early morning, also to notify you at that time of any marked change in the condition of the patient under direct treatment. The telephone is a useful servant, but is often an abused one. Make your profession the one chief object of your life, yet keep in touch with civic affairs, especially those relating to sanitary regulations, and give assistance to all worthy efforts in that line, but use discretion in sponsoring questionable uplift and welfare work.

You are now permanently located, and have made the acquaintance of your competitors. You should promptly seek membership in the County Society, and contribute of your time, energy, and means toward sustaining and strengthening this important society, and others that you may unite with later. It is well to remember that innumerable and overlapping societies have no actual justification for existence. They are expensive, and tend to dissipate efficient medical activity and force.

You have now occupied your comfortable office one month. You have made a few professional calls, and have had a number of office patients. You will doubtless find your patients consisting of the three usual groups—prompt paying, slow paying, and never paying. Naturally, now, your office and personal expenses forcefully direct your attention to your finances. You decide to forward statements on the first of each month, to all indebted patients, unless it be a patient quite ill and under treatment. You will also urge all delinquents to promptly meet their indebtedness, but you will always be considerate of the poor. You should double the charge for all late night calls, except confinement cases and actually urgent calls on the deserving poor.

During your early, necessarily quiet months, find time to become acquainted with your colleagues, pharmacists, bankers, and nurses. The faithful, efficient nurse is the physician's most valued friend and helper. The experienced nurse can be of assistance to the young physician in very many ways. You should early develop a list of trusty nurses, and keep adding to it.

The young physician should cultivate the acquaintance of druggists. The druggist can give you valuable information, especially in the town or small city, as to who are reliable citizens. He can give you suggestions tending to make your prescriptions more palatable. A physician should make every effort to write a clear, legible hand, in order that the druggist may have no difficulty in reading his prescription, in fact he should use the same care he would use in writing a check.

Early make the acquaintance of one or more bankers. You will not necessarily burden the bank with your deposits for a time, but you will need a banker's advise sooner or later in making your investments. You will find the banker's advise safer than that of the oily-tongued blue-sky artist, promising to make you wealthy over night.

You should now consider a simple, efficient method of handling your accounts and case histories. You must have an efficient system of keeping accounts. It should be practical, complete, and legal. As soon as you are financially able, install some practical, as well as legal, method of handling your accounts and case histories—preferably a McCaskey or at least a one-writing method, with a suitable office cabinet for storing accounts and case histories. The day-book and ledger day is past—modern business efficiency demands a system that will hold in court.

Your patients have increased in number, and you are depositing a small amount of money each month; you should now give careful consideration to your insurance and investments. A medical student should, if possible, have provided himself with straight life insurance, amounting to five or six thousand dollars, on commencing his medical studies. Insurance is a low cost emergency asset, and death is certain to occur, sooner or later, therefore the physician should carry some insurance, and increase the amount as he can, especially if he marries.

Statistics show that starting with one hundred healthy men, aged twenty-five, there will be sixty-four alive at the age of sixty-five. Of this number, sixty-one will have lost all their property; fifty-four of them are dependent on their children, relatives, or on charity, seven are still able to work part time, and only three are able to live on their savings. Doubtless the sixty-one dependent men earned enough money during their productive years to have provided for their old age, but they had no plan, and they made no preparation for the rainy day. Fortunately, by means of the optional endowment policy, maturing at sixty or sixty-five, a man can create with certainty an estate for himself and family. The young physician, anxious to carry as large an amount of insurance as his means will permit, may start with an ordinary life policy, and later change to the Optional Endowment, which he can do by paying the difference in cost. He should also carry total disability, which most reliable companies now combine with their life policies. And he should carry a physician's liability policy as a protection against suits for malpractice.

Many physicians prefer to carry less insurance, and put aside a small amount monthly, and invest in bonds, preferred stock, or mortgages. Thrift is the first rung in the ladder all men must tread in the climb to financial comfort. Thrift means spending, always, less than you earn, and investing the remainder wisely. If you save fifty dollars a month for twenty years, and invest it at 5½ per cent, the interest and savings will amount to $21,714.00 at the end of the twenty years. If you can save one hundred dollars a month, the interest and savings would amount to $43,428.00 at the end of twenty years. The three common forms of investment are: first, bonds; second, preferred stock; third, mortgages on farm or improved property.

Your business is the practice of medicine, hence consult your banker before investing. A reliable bank has facilities for making an unbiased investigation and advising you accordingly. Of the three means of capitalizing a large company, remember, bonds are first; preferred stock next; common stock last. Think seriously of the future—save, and invest cautiously. If you save ten dollars per week, depositing at 3 per cent and investing it in a 6 per cent bond it amounts to $7,025.00 at the end of ten years, or $19,717.06 at the end of twenty years. Money invested at 6 per cent interest re-invested every six months, will double itself in twelve years.

Building an estate is analogous to any other constructive problem. In building a house it is necessary to get blue prints. The physician, early in his professional career, should carefully analyze his present and prospective earning power, and decide how much of current income can be saved and invested. The physician, by careful study, will be in position to develop a tailor-made financial program, cut to his own measure, in place of a ready-made garment, constructed by a blue-sky artist. Diversify your investments; bonds, preferred stock, and carefully selected mortgages. More than anyone else, the physician should be aware of the uncertainty of life. Therefore, especially if he has a family, he should prepare for the possibility of early death by a contract with a thoroughly reliable insurance company, and by careful attention to his investments.

It is important that you retain your health. There is no calling that makes a greater demand, physically and mentally, on the individual than the busy practice of medicine. Its hours are long, and the requirements exacting—you dare not rest for fear of being left behind. If the physician is to get the best service out of his body and mind he must plan for play days as well as work days. When your health is gone your practice will disappear with it. Develop an inexpensive hobby. Spend two or three weeks each year away from practice.

The importance of Medical Economics is apparent when we carefully consider the time, effort, and cost of a medical education at the present time. The average age of the present-day graduate is twenty-seven. Seven years of the young man's life, or nine if he takes the full college course, and $9,000 to $11,000 of some one's money have gone into the preparation of the young physician for his work.

He graduates with honor, and enters upon his life's work. He soon becomes aware of the fact that a large part of the population is financially unable to pay him for his services. To the needs of this class he gives his services freely and gladly, as the profession has done from time immemorial. It is estimated that a million dollars a day are contributed to society in America by the medical profession through gratuitous medical services. Service is the prime object of the physician, but he must live to render that service. In view of the large amount of gratuitous service he is obliged to render it becomes necessary for him to apply strict business principles, or thrift, in the conduct of his practice:

First—he should select a good location.

Second—he should carefully arrange and equip his office.

Third—he should study the people liable to comprise his future patients.

Fourth—he should persist in making his profession the one chief object of his life.

THE ORR METHOD IN TREATMENT OF CHRONIC OSTEOMYELITIS*

By Myron O. Henry, M.D.

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The treatment of chronic osteomyelitis of the long bones has been much improved and simplified since Orr, of Lincoln, Nebraska, published his first communications on this subject. We have used this method on a fairly large number of cases of chronic osteomyelitis, and we feel that it can be recommended, providing Orr's instructions are carefully followed. At first blush it would seem unsurgical to encase a draining wound in a closed plaster-of-Paris cast, and, following this, not to inspect the wound for a period of three or four weeks.

Orr has laid down four simple rules for the treatment of chronic osteomyelitis, which, in our opinion, are a step forward. Briefly, Orr's rules are as follows:

1. "Adequate drainage—wide open to the depths of the infected area."
2. "Primary asepsis, or antisepsis, to reduce the focal infection at the point of acute disease or injury."
3. "A postoperative dressing that will protect the wound and permit no opportunity for re-infection."
4. "Immobilization." (Rest in the correct anatomic position.)

To carry out these rules in chronic osteomyelitis, a large incision is made over the infected area of bone. The skin and soft parts are retracted just enough to permit access to the entire diseased area. Next, a window is cut into the bone, removing all of the disease and necrotic bone and reaching all the pus-pockets within. Overhanging edges are removed—the bone is "saucerized" as urged by Ryerson. The diseased tissue is cleaned out gently with a chisel, avoiding unnecessary damage; the resulting cavity is then sponged dry and swabbed out liberally with tincture of iodine, followed by alcohol. Next, the entire wound, wide open, is loosely packed with sterile vaseline and vaseline gauze. Loose, dry sterile dressings are applied, and the extremity is encased in a plaster-of-Paris cast. No windows are cut in this cast for drainage, nor is it split; and such a cast enforces rest. The parts are held in correct anatomic position, and the adjacent joints are included to enforce real rest—usually at least one joint each side of the affected region. Finally, the dressing is not disturbed for three or four weeks, unless some untoward symptoms appear.

The odor is due to the secretions which become absorbed by the wadding that is present under the cast. The patient does not complain of the odor, but it is sometimes quite noticeable to those who are visiting the patient. In a great majority of cases we have found that the odor is not very prominent, and usually it is not noticed before the tenth or twelfth day. Occasionally it is found that the discharge is large enough in amount that it trickles from the end of the cast, although this does not happen often. Neither the presence of odor nor the presence or amount of discharge should be any source of worry if the temperature remains normal and if the patient is otherwise comfortable.

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*Presented before the Eau Claire and Associated Counties Medical Society, March 26, 1928.

A great advantage of the method lies in the comfort it gives the patient. One has only to think of the child with osteomyelitis and to remember the screams which heralded the approach of the daily dressing when treated by earlier methods. Sedatives are rarely needed after a properly applied Orr dressing. Pain, in osteomyelitis, is due to insufficient drainage, or inadequate immobilization. If the Orr treatment is to be satisfactory, both of these factors must be given close attention.

The operation, which precedes the Orr dressing, must be a thorough one. The incisions must be long enough to allow a complete cleaning out of the diseased area, together with removal of sequestra. The bone edges must be carefully removed and the bone cavities "saucerized" when it is at all possible. Overhanging edges must be removed and all pus-pockets evacuated. Inadequate immobilization interferes with free drainage, and it also prevents absolute rest, an important principle in the cure of nearly all diseases. Rest in osteomyelitis means not only muscular relaxation and fixation in correct anatomic postures, but it also means rest from irritating chemicals, bothersome dressings, and secondary infections.

The Orr method fosters localization of the inflammatory process, and thereby shortens its duration.

An advantage in this treatment lies in the ease with which the surgeon can handle the cases. The dressings are so infrequent that the surgeon need not turn them over to his assistant or nurse, but can, and should, give them his personal attention.

The remote advantages of the method are also significant. Rest in the correct anatomic posture prevents muscle spasm, and lowers the permanent disability so often seen in these cases, such as deformity, contracture, and ankylosis.

We have been using this method during the past two years with gratifying results. Some fifty cases have been done during this period, and in this series there have been no deaths, and no second operation has been necessary, nor have sequestra presented themselves for later removal. We believe that the method is a good one and that it represents a tremendous step forward in the treatment of chronic osteomyelitis. The method, however, is not fool-proof. The user of this method must have, first of all, a thorough understanding of Orr's idea. The details of the procedure must be given close attention and carried out minutely in every respect.

To recapitulate: The Orr method requires, first of all, a careful and thorough cleaning out of all of the diseased area. Second, careful attention must be paid to overhanging edges of bone—one must make certain that all pus pockets are "saucerized." Third, absolute rest of the part is necessary with this treatment. Fourth, renewal of the dressings every three or four weeks. It is important that the renewal of these dressings should be done with the most painstaking aseptic precautions. After the operation and application of the cast, these cases naturally require careful watching. We feel that they must be carefully observed in the hospital for the first four to six weeks. After they return home, daily temperatures are taken, and the patient is instructed to remain in close contact with his family physician.

Orr also advocates this treatment in acute osteomyelitis, but our experience has been too limited to quote.

It may be further said that, while we believe the Orr method is a genuine advance in the treatment of chronic osteomyelitis, the other factors of the cure should not be neglected. The value of fresh air, sunlight, good food, and careful nursing are not to be forgotten in the application of this, or any other, method in the treatment of chronic osteomyelitis.

Of our fairly representative group of cases, I will briefly mention only two. The first case was a child ten years old with multiple chronic osteomyelitis involving the right and left tibii and the left ulna and clavicle. On account of the fact that the child took the anesthetic nicely, and we had good assistance, the four above-mentioned affected areas were operated on at the same session, and Orr fixation dressings, including plaster casts to both legs, were applied. Four months after the operation there was complete healing.

The second case was one of osteomyelitis and epiphysitis of the lower end of the tibia, following a compound fracture of the ankle, in a seventeen-year old football player. There existed a suppurative arthritis in the ankle joint, and the case looked like one for amputation. On operation the entire lower epiphysis of the tibia was found a sequestrum and in fragments, together with osteomyelitic involvement of the lower end of the tibia. Two wide, anterior, longitudinal incisions were necessary to thoroughly clean out the joint. Following the operation the usual iodine, vaseline, and plaster-of-Paris dressings were applied. The casts were changed every four weeks and Orr dressings renewed. Postoperative treatment covered a period of four months, during which the patient was absolutely comfortable, and at the end of which time complete healing had taken place with a stiff ankle in good position. To-day, one year after healing, the patient is walking.

PROCEEDINGS OF THE MINNESOTA ACADEMY OF MEDICINE

Meeting of March 14, 1928

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town and Country Club on Wednesday evening, March 14, 1928. Dinner was served at 7 P. M., and the meeting was called to order at 8 P. M. by the President, Dr. John E. Hynes. There were thirty-three members present.

The minutes of the February meeting were read and approved.

The president appointed Dr. A. T. Mann (chairman) and Drs. Geo. Douglas Head and A. R. Colvin a committee to draw up suitable resolutions on the death of Dr. John G. Cross, a past president of the Academy.

Dr. Arnold Schwyzer, St. Paul, reported an operative case, in which a large tumor was removed from the upper part of the chest. The patient was presented at this meeting.

Dr. A. N. Collins, Duluth, read a paper entitled "The Relationship of Gall-bladder Disease to Diabetes." This was illustrated with numerous lantern slides.

DISCUSSION

Dr. A. W. Ide (St. Paul): Dr. Collins has brought to our attention in a very graphic way the association of gall-bladder infection with pancreatitis.

There are various theories advanced and much work has been done to determine just how this infection from the gall-bladder reaches the pancheas and just how it affects the pancreas.

There is probably some doubt as to just how this occurs. It is, however, a matter of every-day clinical history that an acute gall-bladder infection is a danger to the pancreas. I would like to report a case of acute gall-bladder infection that was followed by an acute pancreatitis.

Case Report: This woman is aged fifty-four. On September 11 she was taken rather suddenly with severe pain in the abdomen; the pain was quite generalized, but a little worse on the right side. The pain was so severe that the patient required morphin. It was accompanied by nausea, vomiting, and marked weakness. The leucocyte count was 14,000.

In twenty-four hours the pain had subsided a little and definitely located itself in the upper abdomen, diffuse at first, and then there were tenderness and some rigidity in the upper abdomen. During the next two days the pain subsided still more. The patient passed a large amount of urine, became restless, thirsty and the mouth was dry. On the fifth day she was lethargic and thought and spoke very slowly. Her mentality was very slow.

The diagnosis of diabetic coma was made. The urine contained large amounts of glucose and acetone. This patient was put on insulin and has come through very well.

Seven days after the onset of her illness there were a 0.38 of blood sugar and a very high glycosuria. Under insulin she came down to absence of glycosuria and 0.16 of blood sugar, just a little below the threshhold, hence no glycosuria; but she still had an hyperglycemia.

This patient had an acute inflammation of the gall-bladder with a resulting acute pancreatitis. In her past history there was nothing to suggest a diabetic condition, but there had been six attacks of gastrointestinal disturbance suggestive of gall-bladder disease.

I operated on her after she had recovered from her acute illness and removed a severely diseased gall-bladder that contained stones. Since the operation she has had no recurrence of the trouble. There has been no subsequent sign of diabetes.

Dr. Benjamin (Minneapolis): I have a diabetic case with gall-stones in the hospital at the present time. The patient came to the office while I was out of town, in January. She became sugar-free under treatment and about a week or ten days ago I operated on her. At operation I found the gall-bladder was large, adherent to the liver, which was sclerotic in areas, and the pancreas was enlarged. There were a number of adhesions around the gall-bladder and a number of stones in the cystic duct. Two days before I operated she had gall-stone colic. We have not made tests of the blood and urine lately. Right after the operation the sugar returned. Now on proper diet she is gaining and feels very well.

I have always felt that there was occasionally some relationship between gall-bladder disease and diabetes. One can have disease of the pancreas without producing diabetes, but does operating on the diseased gall-bladder ever overcome the diabetes? I recall one case in which that seemed to have occurred some years ago. I drained the gall-bladder, and the last report we had on the case was that she was sugar-free and practically well.

Dr. Collins (closing): It is true that cholecystitis and gall-stones are very common findings. Mentzer, of Rochester, found, I believe, that what pathologists regard as cholecystitis is almost a universal finding at autopsy.

The point I wished to bring out is that diabetes and gall-bladder disease are associated conditions; and to show in tabular form these associations; also by tabulation to see if there were any conclusions which might be drawn.

I do not mean to suggest that chronic cholecystitis is invariably a precursor of diabetes. I do not mean to say that it is not. We may find out some day that it is a larger factor than we now believe.

These cases I have chosen from autopsy material over a six-year period. These showed 32 per cent incidence of gall-bladder disease. Some one else found 38 per cent of incidence in a smaller series.

From the anatomical standpoint, I believe it has been estimated that 53,000 islands of Langerhans are present on the average in the pancreas and those chiefly in the tail of the pancreas. In the earlier stages of cholecystitis, with chronic inflammation of the pancreas, one often finds swelling in the head of the pancreas and no sugar in the urine. Suppose this condition should go on from year to year untreated. Shall we then find in the older cases that this process has gone on until there are chronic changes involving the tail of the pancreas as well as the head and a greatly reduced number of islands of Langerhans and symptoms of diabetes clinically?

Dr. Ide's case is very interesting. I have one in the hospital now very much like the one he describes. A swollen head of the pancreas was found and patches of fat necrosis on the omentum.

There are a number of problems, and some of these problems are far-reaching: Why should it be of more common occurrence among women? Has the type of infection anything to do with the situation? Or have the infections that women are subject to anything to do with it?

Some one mentioned the subject of associated arteriosclerosis. Of course we have always associated this with diabetes, but we have never definitely shown that they have a direct relationship. And can we say that they do not have a common factor —infection?

This has been a very interesting study. I hope there will be some concerted effort in the profession to see if we cannot establish a more definite relationship between these two clinical entities.

Dr. F. W. Schlutz (Minneapolis) gave a report on the Pan-American Conference on Child Hygiene, and his impressions of South American Pediatric Clinics.

The meeting adjourned.

Carl B. Drake, M.D.
Secretary.

BOOK NOTICES

A Text-book of Pathology. By Alfred Stengel, M.D., Sc.D., Professor of Medicine, University of Pennsylvania, and Herbert Fox, M.D., Professor of Pathology and Director of the Pepper Laboratory of Clinical Medicine, University of Pennsylvania. Eighth edition. 552 Text illustrations. Many in colors. Philadelphia and London: W. B. Saunders Company, 1927.

This work has had a wide use as a text-book in general pathology and has gone through eight editions. The last edition follows the same plan as the former editions, taking up pathology in the usual text-book fashion, and is particularly convenient for students.

It is meant for a brief text, taking up all the essentials but avoiding controversial problems.

The subject of pathology is thoroughly covered, and the foundation for pathology can be obtained from this book alone.

The drawings are excellent and illustrate well the points intended to be brought out.

The bibliography is brief but covers the most important and accessible articles on pathological subjects.

Clinical Diagnosis by Laboratory Methods. By James Campbell Todd, Ph. B., M. D., Professor of Clinical Pathology, University of Colorado, School of Medicine, and Arthur Hawley Sanford, A. M., M. D., Professor of Clinical Pathology, University of Minnesota (The Mayo Foundation), Head of Section on Clinical Laboratories, Mayo Clinic. Sixth edition, revised and reset, 346 illustrations, 29 in colors. Price $6.00. Philadelphia, W. B. Saunders Company.

The book has been thoroughly revised to meet the advance in laboratory diagnosis. Tests of little value have been discarded, and only methods of recognized value have been included.

Detailed directions for carrying out the procedures are given. Separate chapters deal with the urine, sputum, blood, gastric analysis, feces, animal parasites, puncture fluids, serologic methods, blood chemistry, etc.

The late and tried methods in blood chemistry, the Kahn precipitin test, the Kolmer Wassermann technic, are a few of the important tests included.

The chapter on animal parasites is well illustrated by photomicrographs, and the illustrations throughout the book are excellent.

The descriptions of tests are clear, and in such detail that the technician with little experience should be able to carry out the procedures.

The book can be highly recommended as a technician's and student's guide book.

Floyd Grave, M.D.

THE
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The Hennepin County Medical Society
The Soo Railway Surgical Association
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MINNEAPOLIS, JUNE 1, 1928

THE AMERICAN MEDICAL ASSOCIATION

We hope our readers are not getting tired of seeing this caption, but there are still many inquiries coming in as to when the Association is to meet and where and how, and so on; and we want to repeat, as we have before, that registration begins on the morning of June eleventh, which happens to be on a Monday. It is to be sincerely hoped that all men from the Northwest who read THE JOURNAL-LANCET will see that their registrations are in promptly and early, because it will save a good deal of confusion for men coming in on later trains and during the following days.

There will be present during this meeting a representative of the Associated Press, who comes from the New York office to cover the convention, while the papers of Minneapolis and St. Paul will report more in detail as the time of the convention draws near. It is to be hoped that the articles which have already appeared in the various daily papers will be copied and commented on at least by the country papers. A reporter has been employed for the time between now and the meeting to keep the press informed as to what is to happen.

On Monday the Committee on Clinics, of which Dr. J. A. Myers is chairman, and Dr. Theodore Sweetser and Dr. J. M. Hayes chief assistants, have gathered together a suitable number of patients that are to be present for diagnostic purposes. There are to be no operations. These are dry clinics and wholly diagnostic. The various branches of medicine have been pretty well covered, and the men who come here to give the clinics come a day or two in advance so as to examine the patients and be ready to deliver their diagnoses and opinions. This means a great sacrifice on the part of the clinicians selected for this purpose by the American Medical Association and by the Committee on Clinics, consequently they ought to have a warm reception; and certainly the material to be presented ought to be worth while for a man to desert his practice for an extra day and be present at the opening meeting on Monday. The clinics begin at nine o'clock on Monday morning and will continue until four-thirty in the afternoon. They will be held on the stage of the Auditorium. The program for this day is given on another page.

Then the Association officials have invited a number of prominent clinical men from the East and West, not in our immediate vicinity, to deliver clinical lectures on Tuesday, and these are quite as important in a way as are the clinics on the previous day. Then, too, our readers and the men in medicine generally ought to be present at the opening of the Scientific Section in the Auditorium on Tuesday evening, at which time the president, Dr. Jabez N. Jackson, will be superseded by Dr. W. S. Thayer, of Baltimore. At that time, too, Dr. Jackson and Dr. Thayer will each deliver an address. In order to be admitted to this meeting it is quite necessary that the members register and acquire their badges or insignia for admission. On this evening the huge and magnificent organ which has been constructed and installed in the Auditorium will be used for entertainment purposes and to provide music while people are settling themselves in their seats. That organ alone will be worth hearing because it is said to be one of the largest organs in the world. To one who loves music there is nothing more impressive than to hear a great and glorious organ. It might be well to be on hand early in order to get a seat for this affair, as the Auditorium will probably be crowded at that time.

On Wednesday morning at nine o'clock the various Section meetings begin. The locations of the various Section meetings was printed in the May fifteenth issue of The Journal-Lancet. The schedule of clinics is to be printed in this issue, as well as the names of the clinicians who are to give these diagnostic clinics. The Section meetings are very important, and one may go from one Section to another with the same badge or insignia. And if the attending members will simply remember that all of the meeting places are within a radius of two and a half blocks there will be little difficulty in finding their proper and desired Sections.

Wednesday noon and Wednesday evening will be devoted to luncheons and dinners, alumni functions and mild entertainments of that sort. After the Minnesota Alumni Banquet, at the Hotel Nicollet, there will be a general entertainment for all members of the A. M. A. Again, the suggestion is to go as early as you can get in line.

On Thursday the Section work continues and is carried on through to Friday. On Thursday night a reception is given to President Thayer at the Marigold Ballroom. This room was chosen because it is a very large room and has a perfect floor for the dancing which will follow the formal reception. The music will be good and stirring, and those who love to dance will have a fine opportunity.

On Friday the Section work will be continued, as we have said before. As a rule the men begin to leave on Friday, as by that time they have heard about all the medical lore they can absorb; then, too, they are anxious to get home again.

"WHAT DO THEY GET OUT OF IT?"

Walter B. Pitkin has written a very clever article in the June *Century* on "The Simple Souls Who Harken To The Fake Psychologists." He speculates as to why they are so successful, and in order to determine he attended some of their meetings and found himself listening to a woman who makes more than $200,000 a year selling platitudes and bunk. He finally concluded that he would have to study the people who pay her the money; and he describes them as being just as he expressed it—simple souls who believe anything they hear or that is told them, particularly by so-called psychologists.

All the large cities are infested with this class of people, and the majority of them do very well at their trade, that of psychology, applied or taught. They even tell you how to make money in business, but no one ever profits by their advice so far as we have been able to learn, chiefly because they are simple souls themselves, and they undertake to teach classes of women (their classes are mostly women) what to do, how to do it, and how much they will get out of it. All kinds of people are found in the audience, members of all kinds of cults, but most of them have not very much inside of their own skulls, for they were not trained that way. One of these exponents of applied psychology had a really very clever idea. After he had gotten up his class, which consisted of twenty-five women, each woman paying $50 for the course (he had a number of classes), one of his first instructions to them was that everyone of them should take a teaspoonful of epsom salts every morning; and we assumed that he based this treatment on the fact that if they had a good bowel movement in the morning he could put anything into their heads—after depleting their intestinal tract. He told them they would see things better, think clearer, and learn faster. The rest we can easily leave to the reader's imagination.

At all events, they are diminishing in numbers now, although some of the sect come from foreign lands and we are getting our fair share from India; they can impress a woman better than any other man within a radius of a hundred miles. How they do it is best known to themselves. But it is not queer when one remembers that the majority of people are devoted to cults and fakers and to those who assume knowledge and have a dramatic and spectacular way of displaying it. Perhaps that is one of the reasons why so many people go to the cultist rather than to the doctor, because they think if they get something first hand—and the cultist shows his wisdom by telling them some things that are unimportant, but intimate and private, of which they know a smattering; he makes an impression on the individual, which we fear some doctors do not. The latter are trying to practice medicine fairly and squarely and with due consciousness of their duty to others and their expectation of helping the sick.

The people who compose the audience are easily carried off their feet, and they do not recognize a commonplace expression of ideas when they hear it even, let alone when they see it. They believe that this sort of advice can take them almost anywhere, put them into almost any kind of condition physically and mentally. As one woman said (in Mr. Pitkin's article) when the lecturer came on the stage: "Oh, she's wonderful! She is indeed! Have you heard her before? She carries you right off your feet! Why, do you know, after I nursed my babies, I was so flat-chested, I was ashamed—well, she taught me (she was here four years ago, you know)—taught me to concentrate my mind so that in a few weeks I was able to increase by bust measure from thirty-six to forty! Look at me now!"

Mr. Pitkin quotes a case where some woman wants to develop certain parts of her body, particularly her breasts, and she lies on the floor with her eyes covered with a black cloth and concentrates half an hour a day; she admits that "with the door-bell and the telephone and the dumbwaiter, ice to take off and garbage to put on, and the children to get off to school it is not always easy to find the half-hour daily for concentration. But, of course, you have to be persistent."

"But at that moment the Goddess of Great Desires, radiant in a scintillating purple gown, stepped out on the platform. All the buzzing and chattering and fussing with coats and galoshes stopped. Her worshipers took a deep breath and leaned forward expectantly." And this is what she said: "Well, how are you tonight, folks?" Her smile flashed brightly through their weariness. They responded lustily—in chorus as they had been taught to do—"Fine and dandy! Why shouldn't I be?" And then the magic began. "Well, folks, what do you want most in the world? Who most do you want to be like? Do you want to ride in your own Rolls-Royce? Do you want to change the shape of your nose? Or earn a millon dollars in the next four years? How about it, folks? Do you want to get that job? Win that man? Live for three hundred years?" Then she makes three promises. "First, if you are sick, you can be well! Second, if you are unhappy, you can be happy! And, last, if you are a failure, you can be a success!"

Now isn't that fine twaddle for an audience to swallow, digest, and think about? Evidently the medical man has lost some of this breeziness that he ought to have to impress the general public. But he is too stiff and dignified, although he may have a lot of knowledge which may annihilate this platitudinous stuff that the average quack psychologist gives the public, he thinks it is beneath him to make an ass of himself in order to win favor even with the general public. But it pays, evidently, from what Mr. Pitkin heard and observed.

Here is another distinction that the so-called psychologist makes when some poor man (in this instance a man in poor clothing who had followed this woman around for sixty-nine days listening to her instructions on how to harness the subconscious mind) asked "Where is my subconscious mind?" His neighbors looked disgusted. Such stupidity! But "the Emancipator replied slowly, weighing each word. 'Your conscious mind,' she said, 'is as an egg shell. Your subconscious mind is as the egg inside.' 'Thank you! Thank you!' he said gratefully and sat down well satisfied." For the rest of the evening he glowed and had a bully good time thinking about this glorious platitude and its illustration.

This matter ought really to be brought up before the American Psychological Association, the Better Business Bureau and other respectable organizations and denounced as fake psychology. But do you suppose for one moment it would do these fakers any harm? Not at all. Most of their money comes out of the purses of the poor, and they are not going to be led off by any such opposition as a normal-thinking man might suggest. These people who inhabit the audience rooms of the faker are what the doctors sometimes call "poor stuff." They have not had a chance to exercise their minds beyond certain limitations because they have not much mind to exercise, and they do not want to take the trouble to exercise it. So, in the language of the immortal poet, "Why worry?"

THE TWENTY-FIFTH ANNIVERSARY OF THE HENNEPIN COUNTY TUBERCULOSIS ASSOCIATION

On June 15th, the Hennepin County (Minnesota) Tuberculosis Association, organized under the Associated Charities in 1903 as the Anti-Tuberculosis Committee, will celebrate its silver anniversary.

After 25 years of active work to combat tuberculosis, the Association will pause to take note of its accomplishments in the seventeen years that it has served as a branch of the Associated Charities, and the eight years that it has carried on as a separate corporation.

Impetus was first given to tuberculosis work by Mrs. George H. Christian, who, in 1903, urged that aid be extended to the tuberculous poor in their homes.

In 1902, in Hennepin County, there were no tuberculosis sanatoria, no tuberculosis clinics, no tuberculosis nurses—no program aimed at the prevention and cure of tuberculosis. At that time the tuberculosis death rate in Minneapolis was 244 per hundred thousand population, and tuberculosis was the leading cause of death throughout the country. Through the Association's efforts, co-operating with all public and private organizations interested in tuberculosis, there are now adequate hospital and sanatorium facilities. In fact, Minneapolis has more than twice the standard number of beds per annual death, the national standard being one bed per annual death. There are also tuberculosis nurses to give both educational and bedside care, free clinics in Minneapolis and rural Hennepin for people unable to pay for the services of a private physician, a home for arrested tuberculosis patients, and a free employment bureau for those able to work. The Association has also carried on a persistent campaign of education that has lowered the Minneapolis death rate to 61 per hundred thousand population—a decrease of 75 per cent. Tuberculosis as a cause of mortality and morbidity has been moved from first to sixth place nationally.

To observe the silver anniversary of the Association's founding, a report covering its complete history and achievements is being prepared for the meeting scheduled for June 15, at which past presidents of the Association and honorary members will be guests of honor. Delegates en route to the National Tuberculosis meeting in Portland will also attend the meeting.

Speakers at the Minneapolis session will include Dr. Linsly R. Williams, managing director of the National Tuberculosis Association, director of the New York Academy of Medicine, and president of the New York City Tuberculosis Association; and Mr. Godias J. Drolet, statistician for the New York City Tuberculosis Association.

Dr. N. O. Pearce, president of the Association, will preside at the meeting.

THE NORTHWEST CLINIC OF MINOT, NORTH DAKOTA

On National Hospital Day (May 12) there was dedicated in Minot, North Dakota, a clinic building, which is said to have cost over $150,000. It was the work of four venturesome men, possibly called "fools" by some observers and men of faith by others. These men are Drs. A. R. Sorenson, A. L. Cameron, Andrew Carr, and Andy M. Carr, Jr., who have organized a clinic staff of ten very high-grade men and have equipped their plant with much expensive apparatus to aid them in their work.

Minot, N. D., is a city of slightly over 10,000 inhabitants according to the last U. S. census, and it was the home of the buffalo within the memory of living men.

What is the public reaction to this public-health venture, for, in its last analysis, it is exactly that. A score or more clippings from the press of North Dakota, extending from a cordial editorial endorsement to three or more columns of descriptive matter elicited by the dedication of the building, lie before us; and they say loudly: We, the people of North Dakota, cordially endorse your enterprise, we thank you for your faith in us, we will reward such faith.

MISCELLANY

MINNE-HA-HA

Should you ask me, whence this poem?
Whence this legend and tradition
With the odors of the clinic,
With the blebs and spots of measles,
With the gushing of great bleeding,
With the frequent repetitions
And the wild reverberations
That occur in Session papers?
I should answer, I should tell you,
"From the annual medical meeting,
Now midst great lakes of the Northland
From the town of Minneapolis,
From the State of Minnesota,
From the Mississippi River;
Where the scalpel and the trocar
Slice among the bones and tendons.
I repeat them as I heard them
From the lips of local doctors,
Telling of the annual Session."
By the shores of Mississippi
By the shining Big-Sea-Water
Stands the Session Auditorium.
Crammed within it are exhibits,
Booths replete with tools of science,
Booths containing apparatus;
There in halls will speak the doctors,
Speak of medicine and X-Ray,
Speak of nerves and ophthalmology;
There the specialist will utter
Words about the new in labor
Nerves and otolaryngology,
Drugs and serums, dermatology,
Preventive medicine and gynecology.
There the wrinkled pediatrician
Nurses little Hiawathas,
Puts them in the incubator,
Feeds them milk and carbohydrates.
This the Session's annual call,
What the h—— and d——it all!

Tonics and Sedatives, *Journal of the A. M. A.*

NEWS ITEMS

Dr. P. L. Halenbeck has moved from Crosby to St. Cloud.

Dr. E. R. Griggs has moved from Butte, Mont., to Bozeman, Mont.

Dr. D. W. Johnson has moved from Jamestown, N. D., to Seattle, Wash.

The Pierre Clinic, of Pierre, S. D., moved into its new building last month.

Dr. L. A. Weissgerber has moved from Browntown, Minn., to New Ulm, Minn.

Dr. Frank T. Cavanor and Miss Pearl M. Duncan, of Winnipeg, were married last month.

Work on the 100 bed addition to the Swedish Hospital, of Minneapolis, will begin next month.

Dr. L. A. Fritsche, of New Ulm, is a candidate for the Farmers' Labor Party for the governorship of Minnesota.

Dr. F. W. Mayer, of St. Paul, has returned from a nine-months' trip in Germany and Austria visiting the clinics.

The bid of $145,000 for constructing the south wing of the Sacred Heart Hospital, of Yankton, S. D., has been accepted.

A $30,000 addition to the Minnesota State Tuberculosis Sanatorium at Walker will be built at once for a children's pavillion.

Dr. G. G. Cottam, of Sioux Falls, S. D., made the principal address at Hospital Day celebration at Madison, S. D., last month.

Dr. C. E. Sherwood, of Madison, S. D., has gone to St. Louis, Mo., to spend a month in postgraduate work at Washington University.

The new St. John's Hospital of Rapid City, S. D., was formally dedicated on May 15. It was the gift of the McNamara family to that city.

The citizens of Billings, Mont., raised $20,000 last month in a drive for money to complete the furnishings of the new Deaconess Hospital of Billings.

Dr. O. P. Thorson, a recent graduate of the Medical School of the University of Minnesota, has formed a partnership with Dr. W. P. Lee, of Northfield.

Fargo, N. D., has withdrawn from physicians of the city the right to disregard the 60-minute limit to parking privileges. The ordinance was said to be unconstitutional.

Dr. Horace Scott, of Minneapolis, who graduates this month from the Medical School of the University of Minnesota, will spend a year of internship work in Europe.

The American College of Surgeons has planned to make a survey of all the smaller hospitals in Minnesota. Surveys of the larger hospitals have already been made.

Dr. Louis A. Fried, who has been assisting Dr. J. T. Shelland, of Ada, Minn., for the past six months, has decided to locate in that city and has opened offices by himself.

Dr. C. R. Sanborn, who formerly practiced in Bemidji, and has been for some years in practice in Oakland, California, has returned to Bemidji and resumed practice there.

The sixth annual meeting of the staff of the McKennan Hospital, of Sioux Falls, S. D., was attended by more than fifty physicians, and half of them were men from outside of the city.

The work of Dr. G. S. Adams, Supt. of the Yankton State Hospital of South Dakota, has been very highly praised by the Committee of Inspection that recently visited the hospital.

Dr. Clifford Golforth, of the Missouri State Hospital No. 3, at Nevada, Mo., has joined the staff of the Minnesota Hospital, at St. Peter. He becomes Assistant Physician in the Woman's Department.

Dr. Cecil J. Watson, head of the Pathological Department of the Minneapolis General Hospital for the past two years, has resigned and goes to a like position with the Northwest Clinic of Minot, N. D.

Dr. A. B. Moulton, of Lewiston, Minn., died last month at the age of 53. Dr. Moulton was a graduate of the Medico-Chirurgical College of Philadelphia, class of '00, and came to Minnesota in 1912.

Dr. A. C. Strachauer, Director of the Cancer Institute, University of Minnesota, gave a talk on "Carcinoma of the Rectum," illustrated with lantern slides, before the Eau Claire County Medical Society, at Eau Claire, Wisconsin, May 28.

The new Mercy Hospital, of Valley City, N. D., was dedicated on May 14, with appropriate church ceremonies. The hospital was built at a cost of about $200,000, which was furnished jointly by the Sisters of Mercy and the citizens of Valley City.

On another page will be found a list of the men composing the committee in charge of the arrangements for the forthcoming meeting of the A. M. A. in Minneapolis. Information not found in the program of the session can be obtained from the men on these committees.

Dr. Harold Vandersluis, who has been a member of the staff of the Minnesota State Hospital, at Fergus Falls, for the past year, has become an assistant of Dr. George Van Emberg in a private surgical practice in Arlington, N. J.

At the annual meeting of the Minnesota State Board of Medical Examiners last month, Dr. C. L. Sherman, of Luverne, was elected president; Dr. J. F. Du Boies, of Sauk Center, was re-elected vice-president; and Dr. A. E. Comstock, of St. Paul, was re-elected secretary.

Dr. Paul H. Rowe, of Minneapolis, now associated with Dr. E. L. Gardner, joins the Northwest Clinic of Minot, N. D., as head of the Department of Internal Medicine. Dr. Rowe came to Minneapolis seven years ago, having been associated for several years with Dr. Sippy of Chicago.

Dr. W. G. Smith, of Lodge Pole, S. D., died last month at the age of 75. Dr. Smith was a graduate of Columbia, class of '85, and was at one time, we believe, president of the South Dakota State Medical Association. He was a member of the South Dakota State Railroad Commission in 1909 and 1910.

The homecoming fete of the medical graduates of the University of Minnesota, which will take place on June 13, will be a huge and an extremely interesting affair. Several thousand alumni will be present and they will represent almost every class that has graduated. The entertainment will be very delightful.

Evidently due to a typographical error, the name of the North Dakota member (Dr. E. A. Pray, Valley City, N. D.) of the House of Delegates of the A. M. A., did not appear in the list of members given in *The Journal of the A. M. A.* for May 12. Dr. E. L. Goss, of Carrington, N. D., is the Alternate Delegate.

Graduates of Northwestern University Medical School, Chicago, will hold an alumni dinner at the Minneapolis Athletic Club on Wednesday, June 13, at 6:30 P. M. Dean Cutter and other members of the faculty will address the gathering. Tickets $2.00; wives invited. Please send reservations to Dr. F. S. McKinney, 532 LaSalle Bldg., Minneapolis, Minn. A large attendance from the Northwest alumni is wanted.

At the last meeting of the Minnesota Society of Internal Medicine, Dr. Adolph M. Hanson, of Faribault, Minn., was awarded the Society's research prize of $250 for the year 1927. In the year 1928, a similar prize will be offered to the practicing physician, exclusive of members of the Society, in the State of Minnesota, who has been deemed most worthy to receive a prize in research in clinical medicine. Theses will be received by the Secretary, Dr. Edwin L. Gardner, 610 Yeates Building, up to October 1, 1928.

Dr. Hilding Berglund, who has been at the head of the Department of Medicine in the University of Minnesota for the past four years, has been requested by the Rockefeller Foundation to spend a year as visiting professor in the Peking Union Medical College of China. This is one of the institutions financed by the Foundation, and it is a distinct honor to be called to fill the visiting professorship, which some of our most distinguished medical men have filled. The Regents will be asked to grant Dr. Berglund a leave of absence for a year.

The local golf committee in charge of golf for the American Medical Association are very anxious to have a large number of players in the tournament, which will be held on Monday, June 11, at the Minneapolis Golf Club. Most of the events are 36 holes, the tournament being an all-day affair with luncheon and a banquet at the Minneapolis Golf Club. Every Fellow of the American Medical Association is eligible to membership in the American Medical Golfing Association by paying a fee of $5.00 which makes him a member for life. Each year a playing fee of $2.00 is charged which defrays the expenses of the golf committee. Information concerning this tournament and entry blanks may be obtained from Dr. W. H. Aurand, secretary of the local committee, 823 Nicollet Avenue, Minneapolis.

The Health Officers' Association of North Dakota met in Fargo, N. D., last month. Dr. A. A. Whittemore, State Health Officer, outlined the legislation most needed to increase the efficiency of his department, and such legislation will be requested of the legislature next winter. It is proposed to establish units in the state, each unit to be composed of a doctor and two nurses or of a doctor, a nurse, and a sanitary inspector, the last two on full-time service and full-time pay. A unit would include one or more counties and call for a budget of $10,000, which would not increase the present appropriations. Dr. W. C. Nolte, of Jamestown, was elected president and Dr. T. J. Glasscock, of Findly, was elected vice-president of the Association for the current year. The Association will hold its next annual meeting in Jamestown.

The annual meeting of the North Dakota State Medical Association was held last week at Devils Lake, and the message comes to us as we go to press that the attendance was good, the program excellent, and the meeting a great success. The following officers were elected: President, Dr. W. F. Sihler, Devils Lake; president-elect, Dr. John Crawford, New Rockford; first vice-president, Dr. Andrew Carr, Sr., Minot; second vice-president, Dr. H. M. Waldren, Drayton; secretary, Dr. J. G. Lamont, San Haven; treasurer, Dr. W. W. Wood, Jamestown; delegate to the A. M. A., Dr. Charles MacLachlan, New Rockford; alternate delegate, Dr. W. A. Gerrish, Jamestown; councilors: Dr. G. F. Drew, Devils Lake; Dr. P. G. Artz, Jamestown; Dr. L. B. Greene, Edgeley; Dr. J. W. Bowen, Dickinson; Dr. N. O. Ramstad, Bismark. The next meeting will be held at Fargo.

Diagnostic Clinic Day of the A. M. A., Monday, June 11

Since the Preliminary Program of the Scientific Assembly of the A. M. A. was not published in the *Journal* of Association in its issue of May 12, a program for a Diagnostic Clinic Day has been made up, and is as follows:

9:00- 9:45 A. M.—Dr. McKim Marriott, St. Louis Missouri, on Kidney Disease, Sinus Disease, Feeding Disorders, Chronic Infections of the Upper Respiratory Tract of Children.
9:45-10:30 A. M.—Dr. Roy A. Barlow, Madison, Wisconsin, Diagnostic Clinic of Headaches of Nasal and other origins.
10:30-11:15 A. M.—Dr. Winnett Orr, Lincoln, Nebraska, Osteomyelitis.
11:15-12:00 M.—Dr. F. M. Pottenger, Monrovia, California, Pulmonary Tuberculosis and Bronchiectasis.
1:00- 1:30 P. M.—Dr. Dexter Witte, Milwaukee, Wisconsin, Injection Treatment of Varicose Veins.
1:30- 2:00 P. M.—
2:00- 2:45 P. M.—Dr. F. H. Lahey, Boston, Massachusetts, Goiter.
2:45- 3:30 P. M.—Dr. E. P. Joslin, Boston, Massachusetts, Diabetes.
3:30-4:15 P. M.—Dr. J. H. Musser, New Orleans, Louisiana, Pernicious Anemia.
4:15- 5:00 P. M.—Dr. Peter Bassoe, Chicago, Illinois, Neurological.

Northwestern District Medical Society of North Dakota

The last regular meeting of the Northwestern District Medical Society was held at St. Joseph's Hospital, Minot, May 21, 1928. Dinner was served by the Hospital at 6:15.

Minutes of the previous meeting were read and approved. No further business was transacted.

Dr. Ray, of Garrison, gave a case report. Dr. W. A. O'Brien, Assistant Professor of Pathology at the University of Minnesota, gave a talk on the "Basic Service Act in Minnesota." Dr. O'Brien also gave a talk, illustrated by lantern slides, on "Early Diagnosis of Malignancy."

The following members were present: Drs. Cameron, A. Carr, A. M. Carr, Devine, Hanson, Halvorson, Hillis, Johns, Kolb, Leedahl, McGuire, Ransom, Ray, Sorenson, Stucky, Tibbs, Welker, Wheelon, and Yeomens. The following guests were present: Drs. Gates, Rasmussen, and Sampson.

J. R. PENCE, M.D.
Secretary

The North Dakota Academy of Ophthalmology and Oto-laryngology

The North Dakota Academy of Ophthalmology and Oto-laryngology met in the tenth annual session at Devils Lake, May twenty-third, with Dr. Rolf Tainter, Fargo, presiding.

Dr. Chas. E. Conner, of St. Paul, presented an illustrated paper on "Otitic Thrombophlebitis," emphasizing the following points: types of skulls, placement of sinuses, jugular ligation, extent and character of pathology, classification as to bacterial origin, types of operations.

Dr. Conner closed with statistics and case reports.

Discussants of this subject were Drs. G. N. Constans and H. B. Beeson.

Luncheon was served members of the Academy at the Williamette Inn.

Officers for the ensuing year were elected as follows: President, Dr. A. T. Bailey, Jamestown; vice-president, Dr. Geo. N. Constans, Bismarck; secretary-treasurer, Dr. F. L. Wicks, Valley City.

Dr. Conner was made an honorary member of the Academy.

Dr. F. L. WICKS, M.D.
Secretary

MINNEAPOLIS COMMITTEES IN CHARGE OF THE MEETING OF THE A. M. A.

LOCAL COMMITTEE OF ARRANGEMENTS

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Stanley R. Maxeiner, Vice-Chairman
Donald McCarthy, Secretary
George Douglas Head, Treasurer

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J. Frank Corbett, Section on Surgery, General and Abdominal.

Assistants: Arthur F. Bratrud, H. O. McPheeters, Leo Murphy, S. R. Maxeiner, O. S. Wyatt, and M. W. H. Bockman.

H. M. N. Wynne, Section on Obsterics, Gynecology and Abdominal Surgery.

Assistants: D. C. Arnold, M. P. Baker, Wm. H. Rumpf, Wm. Sadler, S. B. Solhaug, and Roy E. Swanson.

Fred J. Pratt, Section on Ophthalmology.

Assistants: Walter E. Camp, George McGeary, H. H. Thompson and Walter Fink.

Horace Newhart, Section on Laryngology, Otology and Rhinology.

Assistants: John S. Macnie, John Morse, J. A. Watson and Erling Hansen.

Max Seham, Section on Diseases of Children.

Assistants: Edward Dyer Anderson and Glenn Matchan.

Edgar D. Brown, Section on Pharmacology and Therapeutics.

Assistants: R. N. Bieter, M. W. Quigley, Harold N. Wright, Elmer T. Ceder, and R. E. Lemley.

Moses Barron, Section on Pathology and Physiology.

Assistants: Charles R. Drake, Hugo Altnow, M. J. Shapiro, and Robert Gelber.

Angus W. Morrison, Section on Nervous and Mental Diseases.

Assistants: R. S. Ahrens, H. B. Hannah and J. C. Michael.

Henry E. Michelsen, Section on Dermatology and Syphilology.

Assistants: John Butler, Harry Irvine, C. A. Borreen, George M. Olson, and D. D. Turnacliff.

Oscar Owre, Section on Urology.

Assistants: Frank Wright, Gilbert Thomas, Walter Kremer, A. G. Wethall, John L. Everlof, and Theodore Sweetser.

Paul Giessler, Section on Orthopedic Surgery.

Assistants: Edward T. Evans and Charles Reed.

W. A. Fansler, Section on Gastro-Enterology and Practology.

Assistants: F. S. McKinney, E. A. Regnier, Macnider Wetherby, Melvin Vogtel, A. Beard, W. C. Andrews, Ralph Knight and Ray Knight.

A. S. Fleming, Section on Radiology.

Assistants: Leo Rigler, Walter H. Ude, Ikada, Monnich, Raymond Lagersen, F. S. Bissell, and R. H. Creighton.

Theodore Sweetser, Section on Preventive and Industrial Medicine and Public Health.

Assistants: Harvey Nelson, Dr. Feeney, and William A. Hanson.

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Assistant Wanted

In a large general practice. Apply to W. C. Fawcett, M.D., Starkweather, N. D.

Locum Tenens Work Wanted

By an experienced physician who is competent and willing to work. Address 476, care of this office.

Location or Substitute Work Wanted

By an experienced physician. Address 485, care of this office.

Wanted to Buy

I desire to buy a small hospital or a sanatorium in the Park Region of Minnesota. Address 478, care of this office.

Position Wanted by Laboratory Technician

Can do all work required of a technician in hospital or clinic, except Wassermanns. Highest testimonial given. Address 471, care of this office.

Opening in Minnesota for Young Man

Have fine location for young Scandinavian or German physician and surgeon either as assistant or partner. Might even sell out as age begins to weigh on me. Have unusually well equipped offices and a small hospital with modern equipment in connection with offices. Address 475, care of this office.

For Sale

Well-equipped office. Reasonable rent. Large practice, established since 1905. Doctor deceased. Modern town of 700 with sewer, city water, electric lights, gravelled streets. Forty miles to nearest large town. Address Mrs. J. E. Schwenden, Bryant, S. D.

Laboratory Work Wanted

By thoroughly competent young woman trained in large hospital. Has organized two schools. Also efficient in Diathermy and Alpine Lamp work. Address 480, care of this office.

Offices for Rent

Office space and living rooms over drug-store in Midway District of the Twin Cities. Centrally located; good location for full-time position. Call Midway 0726 or address 481, care of this office.

A Fine Opening for German-speaking Physician

A splendid opening for a German-speaking physician in North Dakota. Large prosperous territory; no competition, with collections 95 per cent. This place will bear investigation as there is nothing to buy. Address 482, care of this office.

Good Practice for Sale

Well established lucrative practice in excellent office in best city in North Dakota will be turned over to purchaser of office equipment. ($500.00 only). Going to larger city to specialize. Address 483, care of this office.

For Sale

Stereoscope and Allison Operating Table; suitable for office use. Call Main 7879, Minneapolis, between 9:00 and 12:00 a. m., or address 484, care of this office.

X-Ray Unit for Sale

X-Ray Unit, bedside, or portable model, complete with new Coolidge tube, oil immersed transformer in A-1 condition at a very reasonable price. Address 486, care of this office.

Office Position Wanted

By an experienced woman with 14 years experience in physician's office. Good stenographer and book-keeper; some laboratory experience, hypodermic work, and diathermy treatments. Address 463, care of this office.

Apparatus for Sale

One Wappler *X*-ray Stand, and one Potter-Bucky Diaphragm (Engeln made). Both in good condition and reasonable in price. Address 454, care of this office.

Practice for Sale

Fine opening for a doctor in a North Dakota town of 1800 people. Large well-settled territory, only one other doctor. A $9,000 practice. Collections 90 per cent. Nothing to sell but office equipment. Ill health reason for selling. Address 468, care of this office.

Practice for Sale

In Southern Minnesota. $25,000 medical and surgical practice; county-seat; population 4,000; city hospital; complete up-to-date office equipment with 10,000 case records, by two men in partnership established seven years. Practice and equipment sacrificed to purchasers of modern residences. Or will sell equipment and practice separately. Will introduce. Liberal terms. Address 465, care of this office.

Position Wanted

By a woman registered *x*-ray technician, graduate in clinical laboratory work, experienced in physiotherapy, metabolism, some hospital nursing, operating room technic and anesthesia. A No. 1 book-keeper, experienced in business management, secretarial work, histories, etc. Ten years experience in hospitals and clinics with fifteen years business experience. Prefer business management or *x*-ray work but will combine to suit employer. Excellent reference. Address 462, care of this office.

THE

JOURNAL-LANCET

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Minnesota, North Dakota, South Dakota, and Montana

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North Dakota and South Dakota State Medical Associations

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PATHOLOGY OF THE THYROID GLAND*

By L. W. Larson, M.D.
From the Division of Clinical Pathology, Quain and Ramstad Clinic
BISMARCK, NORTH DAKOTA

With the possible exception of the kidney, there is no tissue in the human anatomy over which more divergence of opinion has existed as to its pathological changes, and the correlation of those changes to the clinical pictures found, than in the thyroid. Especially has this been true during the past two decades. The reasons for this are numerous. Because the thyroid is one of the glands of internal secretion and therefore essential to life, it is prone to numerous physiological changes. Discoveries, such as the relation of the iodin content of the drinking water to the incidence of endemic goiter, the use of iodin in one of many forms in the treatment of goiter, and the inability to reproduce all the signs and symptoms of exophthalmic goiter in animals, etc., have served to confuse rather than to clarify the situation. However, the excellent clinical observations of such men as Plummer, and the correlation of clinical findings with pathological changes found in the gland, as a result of iodin therapy by Rienhoff, Giordano, and others, have made it possible to draw fairly

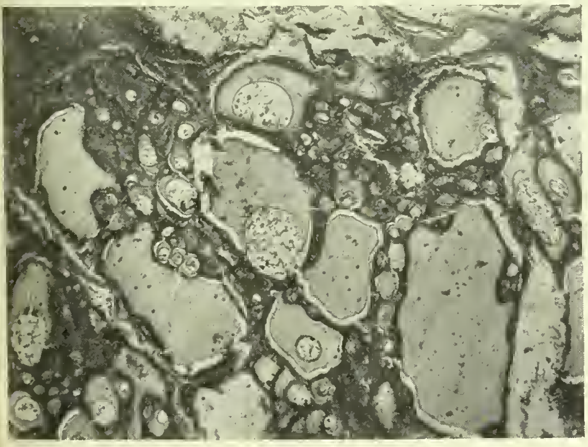

Figure 1. Case I. Photomicrograph from portion of gland close to entrance of ligated vessel.—Note distention of acini with colloid and flattening of lining epithelium.

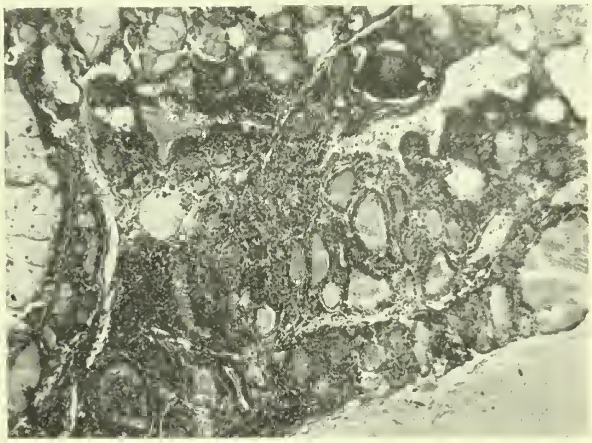

Figure 2. Case I. Photomicrograph from portion of gland at a distance from the entrance of the ligated vessel. —Note lymphocytic infiltration, tall lining epithelium, and less distention of the acini than in Figure 1.

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*Presented before the North Dakota State Medical Association, Grand Forks, June 1, 1927.

definite conclusions as to the interpretation of changes noted in various forms and stages of goiter.

ANATOMY, HISTOLOGY, AND EMBRYOLOGY OF THE THYROID

The thyroid is a ductless gland situated in the front of the neck on the lateral surface of the thyroid and cricoid cartilages and on the anterolateral surface of the upper extremity of the trachea. It is developed as a median evagination of the entoderm lining the floor of the pharynx at a level between the first and second bronchial pouches.

The normal thyroid is invested by a thin capsule of connective tissue projecting into its substance and dividing it into lobes. The lobes are again divided into lobules, and the lobules contain numerous closed vesicles. These vesicles are lined with a single layer of epithelium which, in the absence of a basement membrane, rests directly on the connective-tissue envelope. The vesicles contain normally a material called *colloid*, which, in the resting stage of the gland, is present in comparatively large amounts, while during activity of the gland it decreases markedly in amount. The epithelial cells vary in their shape according to the activity of the gland. In the resting stage they are either cuboidal or flattened, depending upon the amount of colloid present; during activity of the gland they increase in height to that of a tall columnar type.

Classification of Goiter:

Goiter, per se, is a condition in which the thyroid is larger than normal. Numerous classifications have been proposed, but possibly none has fulfilled the need of both clinician and pathologist better than that of Plummer. His classification is essentially as follows:

A. Simple goiter
  1. Diffuse colloid goiter
  2. Nodular or adenomatous goiter
    a. Non-toxic adenoma
    b. Toxic adenoma

B. Diffuse hyperplastic goiter

C. Other conditions of the thyroid, such as strumitis, tuberculosis, carcinoma, syphilis, actinomycosis, etc.

Recent work, however, has shown that toxic adenoma and hyperplastic goiter are usually indistinguishable in their histological changes, and that hyperplastic goiter will undergo involution changes either spontaneously or as a result of iodin therapy to types quite similar to the so-called adenomatous goiter. For these reasons there is a tendency to a more simple classification. This will be discussed late in the paper.

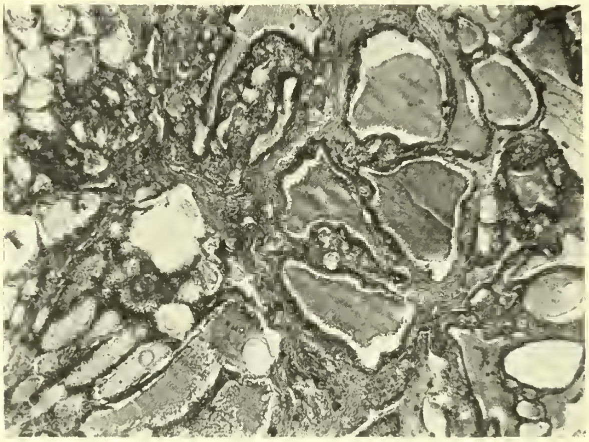

Figure 3. Case II. Photomicrograph of solid portion of a polycystic mass in an exophthalmic goiter in which there had been a natural remission.—Note the large amount of colloid present and the flattening of the lining epithelium.

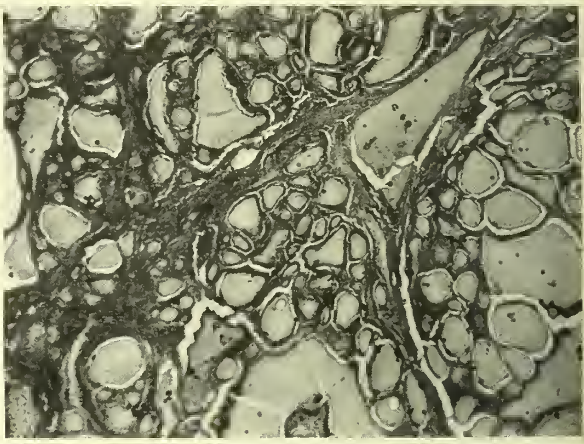

Figure 4. Case III. Photomicrograph showing the effect of iodin therapy in a very toxic exophthalmic goiter.—Note the large amount of colloid present, the regularity of the acini, and the flattening of the lining epithelium.

Diffuse Colloid Goiter:

This is the most frequent cause of thyroid enlargement. Jackson[1] states that 75 per cent of the girls in certain communities, such as along the Great Lakes region, have colloid goiter. Marine and Kimball[2] found that the frequency of simple goiter, of which the colloid type is the most common, varies inversely with the iodin content of the soil and the water used for drinking purposes.

Grossly, the colloid goiter varies from an enlargement found only on palpation to enormous growths that cause a massive bulging of the neck. The gland usually has a doughy consistency, and the enlargement may or may not be symmetrical. The external surface of the removed gland shows rounded elevations corresponding to the distended vesicles. The cut surface shows vesicles distended with colloid. Microscopic examination reveals flattened epithelium lining the distended acini. Here and there the dilated vesicles may have fused to form large cysts, in which case the goiter is called a cystic colloid goiter. Jackson[1] believes that a colloid goiter represents "an active rather than a resting stage of the gland." He states that it is most commonly found in adolescents in whom the marked physiological changes occurring in the body at that time cause an added strain on the thyroid, which, in an attempt to supply thyroxin in sufficient quantities secretes colloid which is stored in large quantities. That this is not the only explanation for the accumulation of colloid in a goiter will be discussed later.

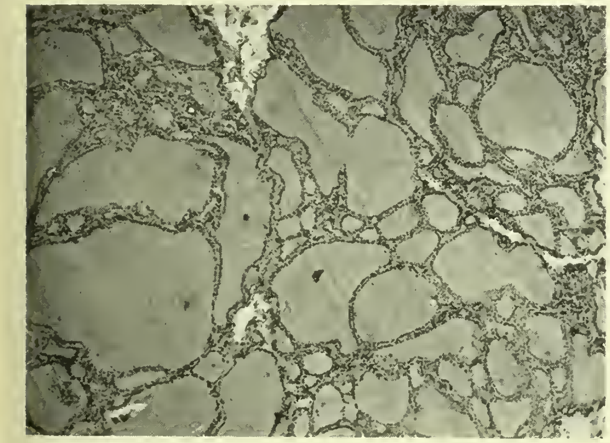

Figure 5. Case IV. Photomicrograph showing greater involution changes in an exophthalmic goiter as the result of iodin therapy than in Case III, Figure 4.—Note the large amount of colloid present and the flattening of the lining epithelium.

Adenoma of the Thyroid:

Adenomatous goiters are characterized, grossly, by the presence of one or more nodules. The tissue comprising the remainder of the goiter may, or may not, be normal thyroid tissue. Microscopic examination of the nodule reveals either the structure of adult thyroid tissue (colloid adenoma) or a fetal thyroid (fetal adenoma), or an intermediate type, or a mixture of colloid and fetal adenoma. The fetal type is composed of small vesicles or solid cords of epithelium with little or no colloid; the interacinar tissue is prominent.

The majority of adenomata are non-toxic. A few become toxic. The history usually reveals the presence of an enlargement of the thyroid for years with no symptoms except possibly those due to pressure. The toxic adenoma gives the same history of long duration of the enlargement with a gradual development of symptoms and signs of hyperthyroidism. There is no doubt but that adenoma of the thyroid, per se, does occur, but I believe, as will be discussed later, that a nodular goiter is often called a true adenoma when it is in reality an involution form of a hyperplastic goiter.

Diffuse Hyperplastic Goiter:

This includes about 80 per cent of the cases of clinical hyperthyroidism (Bell[3]). Its etiology apparently differs from that of simple goiter since its distribution does not correspond with that of endemic goiter.

Grossly, the enlargement of the thyroid is of a moderate degree and diffuse. The gland in the untreated case, or when natural remissions have not occurred, is firm and solid throughout, and on cut section presents a typical fleshy appearance with little or no colloid present. Microscopic examination reveals a hypertrophy and hyperplasia of the parenchyma, with the presence of lymphocytic infiltration and the almost total absence of colloid as prominent features. The cells lining the acini are tall columnar and are often thrown into folds resulting in papillomatous projections into the lumen of the acinus, because of the marked hyperplasia present.

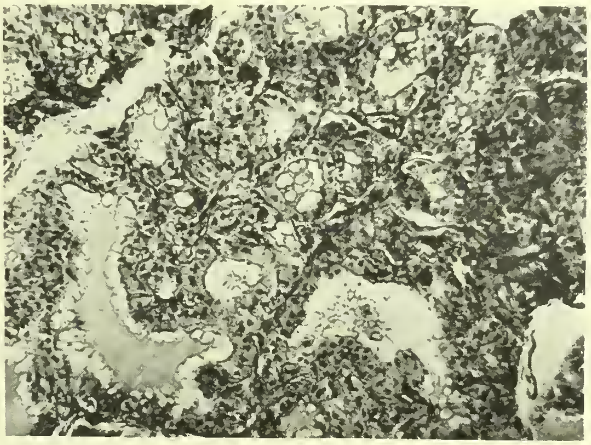

Figure 6. Case V. Photomicrograph from goiter that had been subjected to iodin therapy, without marked clinical improvement. —Note active hyperplasia with relatively little colloid present, tall columnar epithelium, and a packing together of the cells. Areas such as this account for the persistent toxicity of the goiter.

It is nearly a hundred years since Robert Graves[4] first described, in 1835, the clinical syndrome of hyperthyroidism with exophthalmus. He described the disease as being due to a hypertrophy of the thyroid. Horsley[5] in 1866 first described the histologic changes that occur in the gland following partial thyroidectomy in experimental animals, and his work was verified in 1896 by Halsted.[6] That distinct changes occurred in the thyroid in exophthalmic goiter was maintained in 1893 by Greenfield,[7] and his views have since been substantiated by a long list of observers, most noteworthy of whom are Lewis,[8] MacCalum,[9] Wilson,[10] and MacCarthy.[11] Their observations are essentially those given above under a description of the pathology of exophthalmic goiter and represent a true account of the changes occurring in the thyroid in the average acute case of Graves' disease. However, it is a matter of common experience that exophthalmic goiters vary considerably in their degree of toxicity. The majority of the cases are undoubtedly acute in onset and progress, but many are more chronic and a few are known to undergo periods of spontaneous remission. If we include all cases of exophthalmic goiter and toxic adenoma in one class of hyperthyroidism, then the proportion of chronic cases and those undergoing remission and exacerbation will increase markedly. Until recently the observation of the pathologic changes, hypertrophy and hyperplasia, in the thyroid were very complete, but did not take into account the changes occurring during remission and following iodin therapy. The reason for this was that there was no index by means of which the hypoactivity or hyperactivity of the gland could be determined with accuracy. The discovery of an exact method of determining the basal metabolic rate of the patient removed the element of personal equation in interpreting clinical findings and established an accurate and uniform index of the activity of the gland. With this information it is now possible to interpret the histologic changes occurring in the thyroid during the various stages of hypothyroidism and hyperthyroidism.

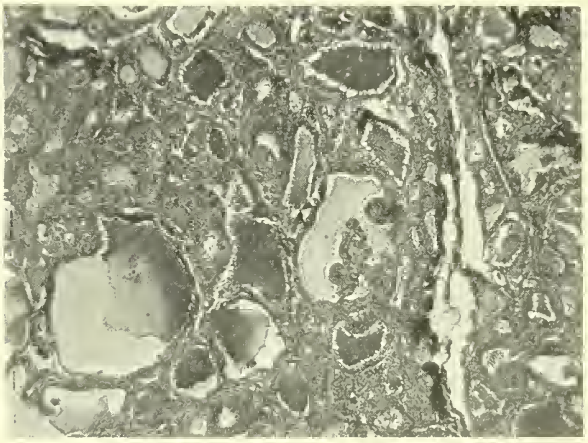

Figure 7. Case V. Photomicrograph showing area of slight involution.—Note the abundance of colloid and consequent distention of a few acini.

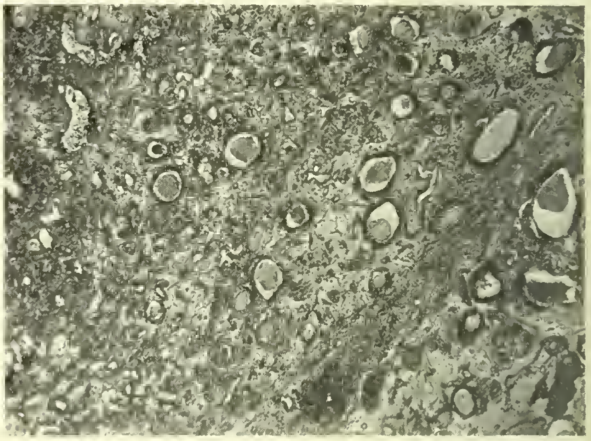

Figure 8. Case V. Photomicrograph showing an area of hyperinvolution.—Note the increase in interacinar tissue, small regular acini, and clumps and cords of glandular epithelium.

Effect of Ligation in Exophthalmic Goiter:

Before the advent of iodin in the treatment, especially pre-operative, of exophthalmic goiter, ligation of one or both superior thyroid vessels was a very popular procedure. Giordano and Caylor[12] have shown that after ligation the thyroid in exophthalmic goiter undergoes a very marked change. Their most constant finding was a tendency for the lumina of the follicles to be large and filled with colloid. The lining epithelium was found to be low columnar or cuboidal instead of tall columnar. The characteristic papillomatous ingrowths of epithelium found in exophthalmic goiter were reduced to mere "sprig-like" processes. These changes, together with the appearance of pyknotic nuclei and areas of fibrosis, were prevalent only in the portion of the gland close to the entrance of the ligated vessels, whereas portions distant from the entrance of the ligated vessels were free, or almost free, from these changes. This would explain why all patients did not improve favorably or completely after ligation. The unaffected portions were as active as before the ligation.

Case 1, Figures 1 and 2, is an example of the effect of ligation only on a goiter. This patient had a marked exophthalmus on admission, was very nervous, and had a tachycardia and a blood pressure of 180/70. The basal metabolic rate was —65. A double ligation was performed six and one-half months before lobectomy. Figure 1 is a portion of the lobe close to the entrance of the ligated vessel and shows involution changes. Figure 2 is a portion of the lobe at a distance from the entrance of the ligated vessel and shows less involution than Figure 1.

Effect of Iodin Therapy in Exophthalmic Goiter:

Although iodin has been used generally for only a few years, the relation of iodin to endemic goiter has been known for over a century. In 1820 Coindet[13] called attention to the fact that goiter could be reduced in size by iodin therapy, and Chatin,[14] in 1852, advanced the theory that endemic goiter could be prevented by the ingestion of iodin, because of his observation that goiter is common in localities in which the iodin content is low. Trousseau,[18] in 1863, gave tincture of iodin by mistake to a patient with exophthalmic goiter, instead of tincture of digitalis, and to his amazement noted a distinct clinical improvement. Bauman,[16] in 1896, found that iodin is normally present in organic combination in the thyroid. However, not until the classic work of Marine[17] appeared, in 1908, was it proven beyond question that the physiological hypertrophies of the thyroid in animals could be reduced in size and to a resting or colloid state by the administration of iodin.

As a result of the work of Marine and his co-workers iodin is now used quite generally in the prevention of endemic goiter. To Plummer[18] and to Starr, Walcott, and Means[19] the credit is due for having advocated the use of iodin in the treatment of exophthalmic goiter. Reinhoff[20, 21] and Giordano[22] published almost simultaneously their work on the changes in the thyroid of exophthalmic goiter following iodin therapy. Giordano[22] observed a group of exophthalmic goiters that had not been subjected to any pre-operative therapy and contrasted the microscopic appearance of such goiters with exophthalmic goiters that had been treated pre-operatively with iodin. His observations are quite similar to those he reported following ligation, namely, a dilatation of the acini with increase in colloid content, a transition of the lining epithelium from that of a tall columnar to that of a low cuboidal or flattened epithelium, partial or complete ironing out of the invagination processes of epithelium into the lumina, a desquamation, often, of the epithelium into the lumina of the acini, and a questionable fibrosis of the gland. He points out the fact that the changes in the gland following iodin therapy are quite generally apparent throughout the entire gland, whereas following ligation of the vessels the changes are more marked close to the entrance of the ligated vessels and fade out in the more remote portions of the gland. The advantage of iodin therapy over ligation is therefore apparent.

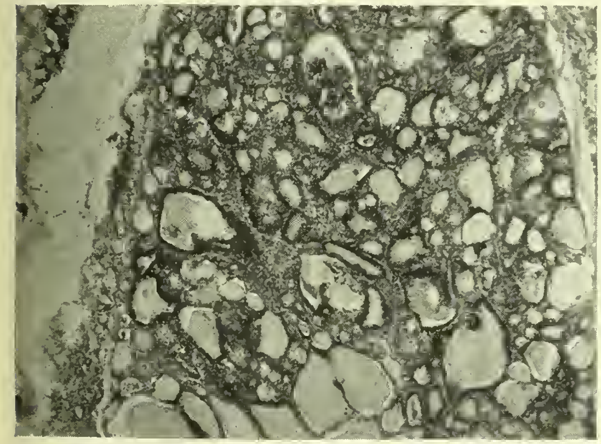

Figure 9. Case VI. Photomicrograph from a goiter subjected to both ligation and iodin therapy.—Note involution changes such as abundant colloid, flattening of the lining epithelium, epithelial desquamation, and the reduction of the epithelial invaginations to mounds and sprigs.

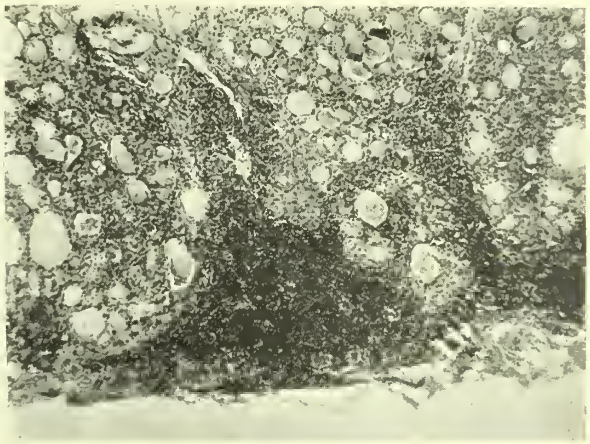

Figure 10. Case VI. Photomicrograph showing hyperinvolution changes.—Note the round cell infiltration, a few small areas of hyperplasia, and the areas of small, regular acini resembling those seen in colloid adenoma.

Rienhoff,[21] of Johns Hopkins, investigated the problem in a very thorough manner. Seven cases of acute fulminating exophthalmic goiter in which there had been no previous treatment were given careful metabolic and other laboratory determinations. Under local anesthesia, a large portion of the right lobe was excised in each case. In this manner tissue was obtained which represented the condition of the gland at the height of the disease. Iodin therapy was then instituted for periods varying from two to four weeks. Basal metabolic rates taken during the iodin treatment showed a progressive fall to below 20 per cent above normal. A double partial lobectomy was then done in each case, and the glands compared with the portion removed before the institution of iodin therapy. The gross and microscopic appearance of the tissue removed from the right lobe showed the characteristic findings described above under the pathology of untreated acute exophthalmic goiter. The tissue from the partial lobectomy showed marked gross and microscopic changes. The surface of the gland was nodular instead of being smooth, the tissue was more brittle, and on cut section the tissue was glary instead of fleshy in appearance. Cysts filled with fluid and localized areas of colloid were noted. Some areas were more granular and gave the impression of being small adenomata. The microscopic appearance showed marked changes with an increase in colloid content with consequent distention of the acini and flattening of the lining epithelium, and reduction of the papillomatous ingrowths to mere sprigs and mounds of epithelium. The tendency, therefore, was toward complete involution to the normal appearance of the gland. A few areas showed what Rienhoff designates as hyperinvolution changes characterized by one of three types: first, formation of a large colloid cyst with the epithelial cells flattened to resemble an endothelial cell; second, dilated acini filled with colloid and together with the surrounding parenchyma being histologically indistinguishable from the adult colloid adenoma; third, areas in which the process had progressed to a degeneration, with disintegrating acini in an abundant edematous stroma, fibrous tissue, and extra-acinar colloid. A few areas also showed hypoinvolution changes in which the changes were very slight if present at all. Rienhoff's[21] explanation of the latter is that they "do not seem to obey the laws governing the remainder of the gland in regard to involution."

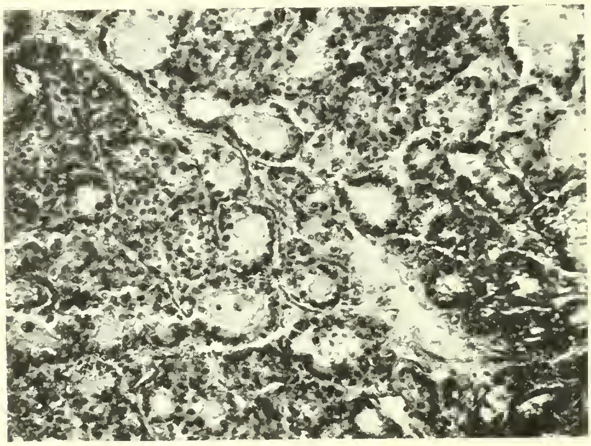

Figure 11. Case VII. Photomicrograph showing hyperplasia in spite of vigorous and varied treatment.

Rienhoff[21] also observed four cases of exophthalmic goiter of more than twelve years duration before operation, in which at least six remissions and exacerbations had occurred. The history of each case revealed the fact that with each remission lumps or nodules appeared in the thyroid, and that these lumps or nodules were increasing in size. Microscopic examination of sections of these goiters revealed changes identical to those occurring in the seven control cases which had been treated with iodin previous to operation. Here, therefore, were four cases of undoubted clinical exophthalmic goiter of long duration, which grossly were nodular and which microscopically showed involution changes ranging from the most slight alteration in the gland to the most marked changes in which the tissue present could not be distinguished from that of the so-called colloid adenomata. The nodules present in the glands were merely areas of hyperinvolution occurring during a spontaneous remission in a gland which was originally hypertrophied and hyperplastic.

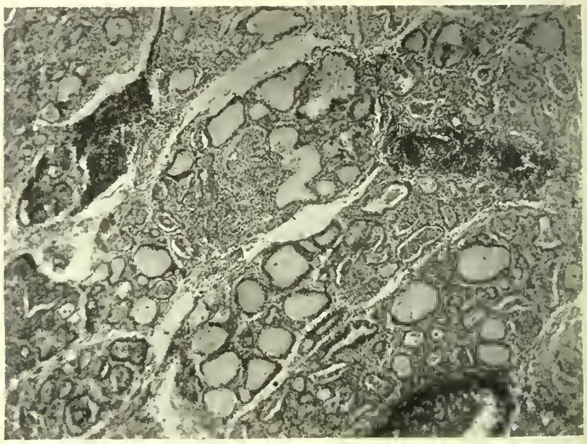

Figure 12. Case VII. Photomicrograph from area of involution.—Note the comparative abundance of colloid, the round infiltration, the epithelial desquamation, and slight flattening of the lining epithelium.

In order to determine if possible the differences between involution changes in a hyperplastic goiter and so-called toxic adenoma, Rienhoff[23] studied 100 cases of nodular goiter. Sixty of these were associated with hyperthyroidism and had been diagnosed as toxic adenomata. The history of each case indicated a low-grade hyperthyroidism of long standing. In 40 of the 60 cases, or in 66 per cent, iodin treatment had been efficacious. In only 5 per cent of the cases could true benign neoplasms be demonstrated. In the remaining 95 per cent of the cases two types of pictures were seen: first, a diffuse hypertrophy and hyperplasia throughout the entire gland with localized areas of typical involution changes which caused the nodular element; second, hypertrophy and hyperplasia in the nodular elements only, the remainder of the gland being normal. Rienhoff[23] states, therefore, that "the term toxic adenoma is incorrect and should be abandoned for three reasons:

1. No two observers agree as to what constitutes a true benign neoplasm or adenoma, or can differentiate it from a localized area of hypertrophy and hyperplasia of the parenchyma.
2. There is no proof that the secretion of a benign tumor affects the organism as a whole.
3. If the secretion of an adenoma does not affect the organism as a whole, there is no reason to believe that the secretion is toxic."

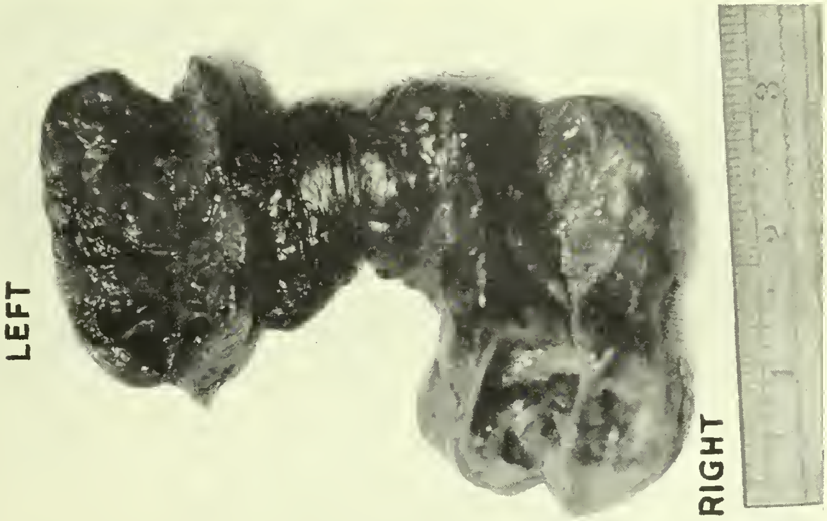

Figure 13. Case VIII. Gross appearance of goiter.—Note the fleshy appearance of both lower poles, the abundance of colloid in the left upper pole, and the colloid cyst in the right upper pole.

COMMENT

Our own somewhat limited experience with goiter substantiates the view held by Rienhoff. Since we have been using iodin, especially in preparing goiter patients for surgery, we have been impressed with the variety of pictures presented by the excised glands. The glands of numerous cases, which on admission were firm and diffuse, changed to soft and often nodular enlargements after ten to fourteen days treatment with Lugol's solution. Where we had heretofore seen, microscopically, a picture of hyperplasia with very little colloid present, the picture was commonly that of a reversion to the colloid type and often to nodule formation. Case II, Figure 3, illustrates a case of natural remission in an exophthalmic goiter. This patient had had her goiter for only one year during which there had been a remission. There was a weight loss of twelve pounds, and the patient was nervous. Slight exophthalmus was present, the metabolic rate was +45, the pulse 85, and the blood pressure 160/85. On gross examination the removed specimen showed a polycystic mass with an abundance of colloid present. Figure 3 shows involution changes characterized by acini distended with colloid, and flattened epithelial cells. These changes account for the natural remission this patient had.

Cases III, IV, and V show the effects of iodin therapy on the exophthalmic type of goiter. Case III was an acute exophthalmic goiter of short duration, with a basal metabolic rate of +48, pulse 146, blood pressure 145/80. Lugol's solution was given for three weeks before operation. The patient died of myocardial failure the first postoperative day. Figure 4 shows an abundance of colloid, an ironing out of the epithelial invaginations, and a flattening of the epithelium. Lymphocytic infiltration, often seen in hyperplastic goiters, remains. Although this patient died of a toxic myocardium, the iodin therapy had produced marked involution changes in the goiter.

Case IV was a girl, nineteen years of age, who consulted us because of nervousness, a weight loss of fifteen pounds, diarrhea, and palpitation. Exophthalmus was marked; pulse 132; blood pressure 154/40. The metabolic rate on admission was +88. Lugol's solution was given for five days, after which double partial lobectomy was done. The metabolic rate fell to —37 the day before operation. Figure 5 is a section of the excised gland and shows the marked involution changes.

Case V was a woman who presented herself complaining of nervousness, weakness, and weight loss. She had a mild exophthalmus. The basal metabolic rate was +65. Lugol's solution was given for one month before double partial lobectomy. The metabolic rate was +49 the day before operation. Figure 6 shows an area of active hyperplasia. In Figure 7 involution changes have taken place. It will be noted that these changes are not as advanced as those seen in Case IV (Figure 5), a condition to be expected since the fall in the metabolic rate in Case V was not as great as in Case IV. Figure 8 shows an area of hyperinvolution in which the interacinar tissue is increased, the acini are small, and a few areas resemble those found in the so-called fetal adenoma.

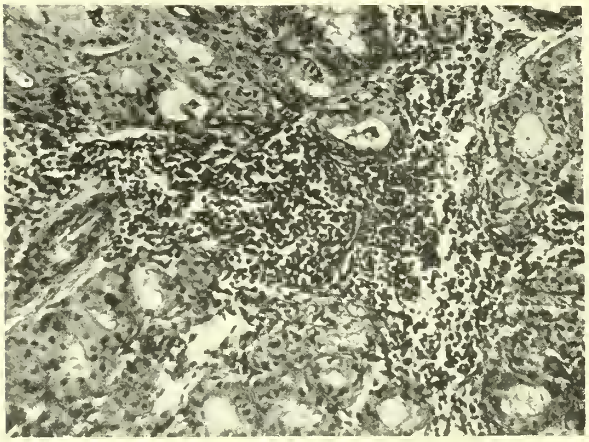

Figure 14. Case VIII. Photomicrograph from a portion of the isthmus.—Note the round cell infiltration, the absence of colloid and the tall epithelium. Areas such as this account for the persistent toxicity.

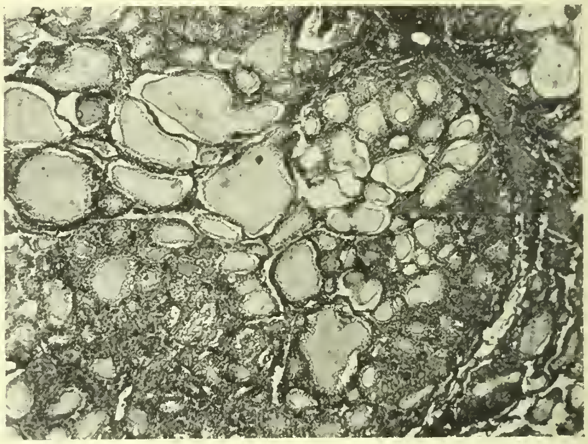

Figure 15. Case VIII. Photomicrograph from the left upper pole.—Note the involution changes, such as abundant colloid, distended acini, and low cuboidal epithelium.

We have had the opportunity of observing a large number of cases of exophthalmic goiter in which a combination of changes due to ligation plus iodin therapy has occurred. The involution changes vary markedly, from only a slight change to the most advanced stages of hyperinvolution.

Case VI entered the hospital in a delirious condition. Exophthalmus was marked, the pulse was 120, the blood pressure 140/65, and the metabolic rate +134. After Lugol's solution had been given for a month the metabolic rate fell to +50, and a double ligation was done. Lugol's solution was given for another month, the metabolic rate fell to +35, and a double partial lobectomy was done. Figure 9 shows involution changes characterized by an abundance of colloid material distending the acini, a flattening of the epithelium, epithelial desquamation, and the reduction of the epithelial invaginations to mounds and sprigs. This corresponds to the involution changes described by Reinhoff. Figure 10 shows an area of marked round-cell infiltration, and a few small areas of hyperplasia surrounded by regular round acini resembling those found in the so-called adenoma. This corresponds with the hyperinvolution change of Rienhoff.

Case VII illustrates the futility of numerous methods of treatment in the rare instance. This girl had an exophthalmic goiter for three years before operation. When first seen she had a marked exophthalmus, a blood pressure of 165/70, a pulse rate of 102, and a basal metabolic rate of +70. After 10 months of rest at home a double ligation was done. Treatment with Lugol's solution was begun four months later and continued for twenty-two months. Clinical improvement was so slight that *x*-ray therapy was resorted to seven months before double partial lobectomy. The gross specimen was diffuse and fleshy with very little colloid present. Figure 11 shows an area of hyperplasia, which would account for the persistence of toxic symptoms. Figure 12 shows an area of involution changes in which there is considerable colloid present, epithelial desquamation, and slight flattening of the epithelium. This could be considered a hypoinvolution change. In spite of intensive therapy with iodin, ligation and *x*-ray, this gland did not respond, the usual involution changes did not occur, and the patient did not improve clinically until, in desperation, a partial double lobectomy was done.

Case VIII shows the changes taking place in a goiter in which double ligation was performed, bromides and Lugol's solution were given, and hot-water injections resorted to, before double partial lobectomy. This patient presented herself with a nodular goiter, a marked exophthalmus, a pulse rate of 130, and a metabolic rate of +110. The goiter had been present for the past sixteen years. Under Lugol's solution the metabolic rate fell to +65, when a double ligation was done. She left the hospital with a metabolic rate of +57 and returned in two months with a metabolic rate of +77. Hot-water injections were then resorted to, and the patient went home for seven months, being given bromides at home. She returned with a metabolic rate of +91 and had a double partial lobectomy after the metabolic rate had fallen to +45 after two weeks of rest in bed and Lugol's solution. Figure 13 is a picture of the gross specimen of goiter removed from this patient. Note the fleshy appearance of both lower poles and the isthmus. There is an abundance of colloid in the left upper pole and a large colloid cyst in the right upper pole. Figure 14 is a photomicrograph of a section from the isthmus. Note the marked hyperplasia present, manifested by the relative absence of colloid, the tall columnar epithelium, and the marked round-cell infiltration. Figure 15 is from the left upper pole. Note the involution change in which colloid is distending the acini and cells are flattened. Figure 16 is from the right upper pole. Note the similarity of this to the so-called mixed fetal and colloid type of adenoma. This is the "hyperinvolution" change of Rienhoff.

All cases of hyperthyroidism, whether diagnosed clinically as exophthalmic goiter or as toxic adenoma, and in spite of the gross appearance of the gland, which we have had the opportunity of observing during the past three years, have shown evidence of hypertrophy and hyperplasia. And in each instance has the degree of hypertrophy and hyperplasia been in direct proportion to the toxicity of the case. This observation has also been noted at Johns Hopkins.[23] Since the hypertrophy and hyperplasia of toxic adenoma and of exophthalmic goiter are indistinguishable, and since acute diffuse exophthalmic goiters can be changed to nodular goiters resembling adenomata in both gross and microscopic appearance by spontaneous remissions and by the administration of iodin, it seems safe to conclude that true toxic adenoma is comparatively rare. The nodular goiter is usually, therefore, merely a hyperplastic goiter which has undergone involution. With this in view it follows that the difference in signs and symptoms of extreme hyperthyroidism as seen in exophthalmic goiter compared with those seen in mild hyjerthyroidism is only a difference in degree of the same process,—a hypersecretion or overactivity of the thyroid gland. It would, therefore, seem logical to simplifiy our classification of goiter to diffuse or nodular goiter, with or without hyperthyroidism. Also the pathological diagnosis of diffuse or nodular goiter, modified by a statement as to the presence or absence of hypertrophy and hyperplasia, will be found to be descriptive and to agree with the clinical diagnosis.

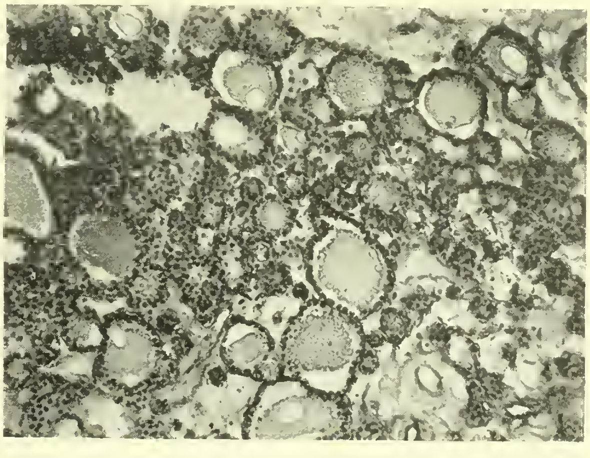
Figure 16. Case VIII. Photomicrograph from the right upper pole.—Note the appearance of a mixed fetal and colloid type of adenoma.

CONCLUSIONS

1. Much divergence of opinion has existed as to an adequate classification of goiter. Plummer's classification has been most widely accepted.

2. The goiters of all cases of hyperthyroidism show hypertrophy and hyperplasia of the parenchyma.

3. Ligation of the superior thyroid vessels will cause the portion of the gland nearest the

entrance of the ligated vessels to undergo involution changes. These changes are characterized primarily by an increase in colloid content of the acini and a flattening of the lining epithelial cells.

4. Exophthalmic goiters undergoing remissions, either spontaneous or induced by iodin therapy, may become nodular; these nodules are indistinguishable from the so-called colloid and fetal adenomata.

5. Hyperthyroidism, regardless of the size, shape, or consistency of the gland, is due to a hyperacitivity or hypersecretion of the thyroid. The severe case differs from the mild case in degree only.

6. A simple classification of diffuse or nodular goiter, with or without hyperthyroidism, seems justifiable.

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INJURIES TO THE SPINE*

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The man with a broken back has always been an object of sympathy. In the popular mind, this condition represents dire calamity. If a patient can walk after such an injury a miracle has been performed. Fortunate was the physician who could produce a patient with little or no disability after he had sustained such an injury.

These patients, if compensation cases, were sure of a substantial settlement. Little or no consideration was given to the location or extent of the injury. The reason for this confusion of some of the worst injuries imaginable with some of the most trivial was largely the lack of accurate diagnosis.

This paper proposes to deal with the injuries to the spine that do not involve nerve structures. Up until comparatively recent years it was impossible to diagnose most fractures involving the spinal column unless there was nerve involvement. One exception to this was fractures of the spinous processes. These processes can be easily palpated and can be diagnosed without difficulty. Fractures involving the deeper seated structures, the bodies of the vertebræ, the transverse processes and laminæ cannot be diagnosed at all accurately without *x*-ray examination. I recall one of these early cases that went to litigation where one expert claimed that he found a crack in a vertebra by means of examining the *x*-ray plate with a magnifying glass. There were a half dozen experts who testified that there was no fracture. The litigant received a substantial verdict.

It is necessary in the consideration of the diagnosis of these cases to take into account the ordinary pathology that may be found in the spine. A general classification of the spinal defects to be considered is as follows:

Anomalies of the spine.
Spondylitis.
Injuries to the spine.
Static defects.
New growths.

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*Presented before the Minnesota Academy of Medicine, Novembr 9, 1927.

For the purpose of this paper it is unnecessary to consider all anomalies of the spine. Only those of special interest in relation to trauma are mentioned:

1. Spina bifida.
    a. Spina bifida occulta.
2. Supernumerary ribs.
    a. Cervical.
    b. Lumbar.
3. Sacralization of the 5th lumbar.

Spina bifida as seen in children is of no interest in this connection except as it emphasizes the minor defects of the same nature.

Spina bifida occulta, on the other hand, is a condition that must be given consideration. This condition may be found in any segment of the vertebræ, but is most frequently seen in the lumbar region. It is still problematical as to whether or not this condition weakens the back. There seems to be no evidence that a small spina bifida occulta in any way impairs function. This is a condition that is seen in 7 per cent of so-called normal spines. Case 1 of this series shows a small spina bifida occulta involving the fifth lumbar vertebra. This patient was struck on the back. *X*-ray examination was made routinely, and the defect was found. The patient was advised that there was a fracture at this point. He was quite relieved when the real situation was explained to him, and the fact made clear that there was no injury to the bony structures.

Supernumerary ribs in the (a) cervical region do cause symptoms. These symptoms are due to pressure. Undoubtedly injuries such as traction on the arms or pressure from above aggravate the symptoms. It is essential to eliminate cervical ribs in the general consideration of injuries in the cervical region. In our experience cervical ribs have not complicated injuries.

Supernumerary ribs in the (b) lumbar region could hardly cause symptoms. The small rudimentary ribs are, however, frequently mistaken for fracture of the transverse processes. This is a common error and the possibility of rudimentary ribs in this region should receive careful consideration in the diagnosis of fracture of the transverse process.

Sacralization of the fifth lumbar is of special interest in dealing with traumatized backs. This condition is present in a very large percentage of spines. Probably 25 per cent of spines will show this condition. It is given no attention until there is some complaint of pain in the back, and then frequently the transverse process is blamed for the trouble. Just what part sacralization of the fifth lumbar plays in back pain is problematical. If only one of the transverse processes is sacralized, it may act as a fulcrum with the spine as a lever. Ordinarily, however, the sacralization of both transverse processes would appear to strengthen rather than weaken the spine. Whatever the real facts may be as to the merits or demerits of the condition, one must take it into consideration. An injured individual is apt to stress any departure from the normal.

Bohart, in a recent publication, has investigated a series of 420 symptomless spines. His series is made up of applicants for employment on a railroad. These individuals were all men applying for the position of switchman. These men had already passed a general physical examination and were ready for employment. A routine *x*-ray examination was then made of the spine in a series of 420 cases and 157 variations from the normal were found. His findings are outlined in the following tabulation:

Deformities of transverse processes	6	5%
Incomplete union first sacral	9	7%
Proliferative changes near articular surface	15	13%
Curvatures	8	7%
Spina bifida occulta	38	33%
lumbar ribs	39	34%
Old fractures of ribs	5	4%
Cervical ribs	3	2%
Supernumerary vertebræ	10	8%
Sacralization of the 5th lumbar	11	9%
Variations in the coccyx	5	4%
Atrophic changes in interarticular cartilages	3	2%
Calcifications in the region of ureter	2	1%
Pulmonary pathology	2	1%
Rudimentary 12th rib	2	1%
Absence of 12th rib	3	2%

These men are employed in switching cars, and in consequence are in frequent danger of injury. There has been no evidence in this series that the pathology found in this routine examination in any way indicated a weak spine. These findings are not conclusive but indicate that ordinary anomalies of the spine in the adult in no way weaken the bony structure.

The spine arthritides are an especially interesting group of cases. For purposes of discussion these may be classified as follows:

1. Infectious arthritis due to foci.
2. Arthritis deformans.
3. Spinal disease due to specific infection.
    a. Acute osteomyelitis.
    b. Tuberculosis.

c. Syphilis.
d. Gonorrhea.
e. Others.

Patients suffering from focal infections are subject to back symptoms. In case these individuals sustain injury the back symptoms may make their appearance for the first time and old symptoms may reappear or be exaggerated. It is difficult to establish the relative importance of the infection and the injury. The two are confused and the injury takes the blame.

Spinal arthritis deformans may be considered the late result of focal infection. In these cases that have marked changes in the spinal column with lipping of the vertebræ and spur formations, a slight injury may have very serious consequence. It is certain that these cases are more susceptible to injury and have a very prolonged convalescence after injury. Some comparatively trivial trauma may cause very serious trouble to some of these abnormal bony structures.

Case 1.—A man, aged 56, was employed as a railway bridge foreman. He had always been unusually strong and muscular, and weighed 200 pounds. He had always been well except for attacks of rheumatism and a good deal of lameness in his back. One day while at work he lifted a heavy piece of bridge timber and felt a severe pain in his back. He continued to work for several days, but during this time his back gave him continued trouble and became progressively worse. Two weeks after the first disability he reported at the hospital. *X*-ray examination revealed extensive arthritic changes in the spine. His disability at that time was total; he could not walk.

His improvement under treatment was very slow and incomplete. He was finally able to get around but was unable to work. He was under treatment for a year. Although this man was only 56 years old, he was given a pension by the railway company and was paid a total disability on his group life insurance policy. This case illustrates the seriousness of arthritic changes in the spine. Slight strain or some trivial injury may result in very serious disability.

The diseases due to specific infection should probably cause no confusion but, as a matter of fact, they are some of the most serious cases that one sees.

Acute osteomyelitis of the spine is a very rare condition. Trauma in all cases of acute osteomyelitis is considered as an etiological factor. The same factors exist in the acute conditions of the spine.

It would seem that spinal tuberculosis had received enough attention so that it would not be necessary to consider this condition in connection with injury. It is a fact, however, that trauma is given a very important place in the history of some cases where there is destruction of the body of the vertebræ, very evidently due to tuberculosis. It is extremely hard to definitely establish the importance of trauma in some of these cases.

Case 2.—This man, aged 46, was employed as a railway clerk. Twenty-five years ago he lost his right leg in a railway accident. He had a high thigh amputation and was wearing an artificial limb and walking with a cane. Other than this, his past history and general examination showed him to be a normal individual with the exception of his back.

He entered the hospital complaining of pain in his back and stated that eight days prior to admission he had sustained an injury. In stepping from the bottom step of a railway coach he got a stitch in his back due to a twist of the body. *X*-ray examination revealed a narrowing of the articular cartilage and some destruction of the articular surfaces of the first and second lumbar vertebræ.

He was put to bed in a plaster jacket and was kept there for three and one-half months. He was then free from symptoms, and *x*-ray showed a marked amount of new bone formation between the first and second lumbar vertebræ. He was then allowed to be up and about on crutches and wearing a Taylor brace.

This man had a tubercular spine with injury history. The injury element very greatly complicated the case. Compression fracture of the bodies of the vertebræ was ruled out clinically but not medicolegally. Perhaps the injury did damage the diseased vertebræ. The patient received a substantial compensation.

The syphilitic spine may present a Charcot picture. Ordinarily the history, the clinical findings, and the Wassermann will lead to a positive diagnosis.

The gonorrheal spine, the typhoid spine, and other arthritides due to specific infection are either typical or of very rare occurrence.

New growths involving the spine are either primary or metastatic. Primary bone tumors have received much attention of late, but in so far as clinical diagnosis is concerned we still depend very largely on a biopsy. Biopsy is not always a practical procedure in these spinal cases, and for this reason it is frequently impossible to make an absolute diagnosis.

Trauma is an etiological factor in bone tumors. The possibility that trauma is a factor even in a known bone tumor must not be overlooked.

The spine is particularly susceptible to metastatic involvement from malignancy in other parts of the body. After the primary malignancy has been diagnosed one may see secondary appearances in the spine. It is not unusual, however, to find a metastatic involvement of the spine before it is possible to make a diagnosis of the primary lesion. Here again, the question of injury may be given a very prominent place when the real trouble is a metastatic involvement.

Case 3.—A man, aged 63, employed as train conductor, reported to the hospital with a lame back. He had several bad teeth which were pulled. *X*-ray examination of the spine revealed no pathology except a mild arthritis. He continued to get worse while under treatment. Repeated *x*-ray examinations of his spine were made, and it was finally revealed that there was pathology in the twelfth dorsal vertebra. It was thought that this "might be due to malignancy or tuberculosis," but consultants were unwilling to eliminate Kummell's disease as a possibility.

A late development of his history was injury. Three months prior to his admission, while boarding his train at a station, he was struck on the back by a baggage truck, which was on the platform and too near the train. He attributed his disability to this injury.

The diagnosis was between Kummell's disease and metastatic malignancy. Nothing definite could be found to prove malignancy. There was no primary tumor that could be demonstrated. The condition continued to get worse in spite of treatment. It is very important to demonstrate the responsibility of trauma in this case. The fact that the patient did not improve under treatment points to malignancy. There is, however, insufficient evidence to rule out trauma as a factor. The case is still under observation.

Fractures of the spine:

1. Unrecognized
2. Spinous process
3. Transverse process
4. Lamina
5. Bodies
    a. Kummell's disease
    b. Crushing injuries

I am of the opinion that there are many unrecognizable fractures of the spine. When we consider the complicated anatomical structure of the spine, with the interlocking processes and overlapping structures, it is safe to assume that the *x*-ray may fail to show some breaks in continuity. In dealing with diseased structures, especially of the arthritis deformans type, one may fail to detect injury to some pathological bony formation. I believe that there is a group of minor fractures of the spine that cannot be recognized clinically.

Fractures of the spinous process are easily diagnosed. Even without *x*-ray the abnormal mobility, the change in outline, usually depression of the spinous process, can hardly be missed.

Fracture of the transverse process, particularly in the lumbar region, is a very common result of injury. One frequently sees fractures on both sides in the same individual. Undoubtedly many of these fractures are due to muscle action rather than direct trauma. Otherwise, it is hard to explain fractures on both transverse processes of one vertebra with injury to the spinous process and other structures of the same vertebra. These injuries are of no very great importance as far as treatment is concerned, but it is very necessary to make an accurate diagnosis for the sake of the patient, as well as for accuracy in reports.

Injury to the lamina is naturally a more serious matter and frequently leads to nerve involvement. The ordinary fissure fracture of the lamina might in my judgment be overlooked.

Injury to the bodies of the vertebræ is perhaps the most important of these cases. The frequency with which these injuries are overlooked emphasizes the difficulty of diagnosis. The body may be very slightly compressed but sufficiently weakened to permit a further collapse of the bone if treatment is not instituted at once.

The traumatising force may be transmitted, as is the case when the individual falls from a height and lands on the buttocks. A sharp flexion of the spine, if of sufficient force, will cause compression of a vertebra. Direct force applied to the back will usually cause other severe injury if it affects the bodies of the vertebræ. Kummell's disease or the late manifestations of injury to the bodies of the vertebræ is frequently seen. The injury may be considered too trivial to warrant careful *x*-ray or for other reasons the real condition is overlooked. Symptoms continue and become progressive. A late *x*-ray shows the unmistakable collapse of the bodies of the vertebræ.

Crushing injuries of the vertebræ without nerve involvement are common. There may be compression of the bodies of the vertebræ with fracture of various other parts of bone without nerve disturbance.

The injuries with some nerve involvement but no actual breaks in continuity of nerve structure should be considered in the same class as the treatment is identical. There may be extensive injury to the spine with involvement of several vertebræ and perfect recovery.

Case 4.—A man, aged 40, employed as a railway brakeman, was injured in an automobile accident and was brought to the hospital immediately. His past history and general examination developed nothing abnormal except his present injuries. He had sustained a compression fracture of the second lumbar vertebra with fractures of the transverse processes of the first, second, third, and fourth lumbar vertebræ on the right side.

He was kept in bed for two and one-half months and then allowed up and about wearing a Taylor brace. He made a complete recovery except for a partial peroneal paralysis on the left side. He was able to return to his work as a freight brakeman six months after injury.

Treatment: Rest is the treatment for all minor spine injuries. If absolute rest can be secured early and for a sufficient length of time, the results are quite remarkable. The bones of the spine repair quite as well and certainly as rapidly as bones in other parts of the body. Traction either from the head or from the legs may be necessary, but ordinarily it is not indicated.

A patient with a compressed vertebral body should be kept in bed, flat on the back, usually with a Bradford frame for at least six weeks. This time is ordinarily sufficient, but this is the minimum. It is best to lengthen this time if there is any doubt. Some patients may require double this length of time.

The patient is then allowed to be up with a well-fitting Taylor brace. This should be worn for several months. The condition is checked up at frequent intervals by *x*-ray. Our results have been very gratifying in all cases so treated.

The patient with injuries that involve the body of a vertebra is given rest for a shorter period of time depending on the extent of the damage. Physiotherapy is an important factor in shortening the period of convalescence in these cases. Hydrotherapy, hot packs, and massage aid greatly in bringing the rigid muscles back to normal.

APPENDICITIS*

By Donald Macrae, Jr., M.D., F.A.C.S.
Council Bluffs Clinic
COUNCIL BLUFFS, IOWA

If it is true that the mortality percentage following operations on the so-called acute abdomen was higher in this country during the years 1926-1927 than in 1912-1913, then something must be wrong, and I have no apology to offer for presenting the old story before you for further discussion.

Before the Omaha Douglas County Medical Society last month, Dr. J. E. Summers made the statement that the mortality of this class of cases (acute abdomen) is 17 per cent higher now than it was a few years ago. Either the patient is received later now than formerly, or a lack of the old-time frequent discussions of the subject may be responsible.

I am convinced, however, first, that too many physicians lacking experience in the management of the complicated types of this disease are attempting operations, and, second, that teachers and text-books fail properly to describe in detail the various methods of attack necessary for a low mortality rate in the serious cases. For instance, a short time ago I inspected several modern text-books. Each had beautiful cuts of the normal appendix, perfectly free from adhesions, each with a tie and purse-string suture, but no more pictures. In one book (Warbasse) the author describes the technic of the surgery of the ruptured appendix as follows:

"Go directly for the appendix, remove it. A good-sized drainage tube should be placed at the stump." (How and why he fails to state.)

"Another tube should be placed in the prerectal pouch." Why? Timid doctors reading this same surgery are gratified to find a lengthy description of the non-operative treatment, and learn that "seventy-five per cent of cases recover *without* operation." He fails, however, to report the percentage of the 75 recovered cases to be stricken later with a second or third attack, each with its list of deaths. Again he says: "It should not be taught that every case of acute appendicitis must be operated upon to save the patient's life", and further on, "after 36 hours no one but the most skillful surgeon should operate".

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*Presented by invitation before the Sioux Valley Medical Society, at Sioux City, Iowa, January 25, 1928.

All of this leads the ordinary reader to infer that in any event after thirty-six hours the mortality without operation is no greater than in those operated on, etc.

To my mind these are dangerous teachings, permitting delay and death to be backed up by so-called scientific authority, and may be partly responsible for the late cases seen to-day with their increased morbidity or mortality.

With this preliminary knock I shall attempt to outline my own ideas of when and how to operate.

In the first place I shall dismiss the so-called chronic appendicitis with a few words. If you and the patient agree to the presence of chronic appendicitis, I think it would be wise to operate. The operation may relieve the patient's mind, if not his belly, but in any event do not fail to make a large right rectus incision and examine the pelvis, gall-bladder, and stomach, not forgetting Meckel's diverticulum. It is indeed surprising the number of gall and kidney stones manufactured soon after some chronic appendectomies. Personally, after excluding extraperitoneal pathology, (pneumonia, pyelitis) if I may be permitted to use the term in its practical sense, I would advise removal of the appendix, after first explaining the truth to the patient the necessity of rather extensive exploration.

In closing my remarks on the chronic condition I wish to make a statement without fear of scientific contradiction, namely, *that no man can make a diagnosis of chronic appendicitis with positive assurance that he will find the organ in any way affected.*

ACUTE APPENDICITIS

From the practical standpoint I would divide the acute form into two great classes (1) early and (2) late.

Early cases are all those not ruptured, regardless of the length of time involved. (One case may be early in 72 hours, another late in 36 hours after onset.)

Late cases are all those ruptured.

EARLY CASES

Early cases in the hands of any ordinary surgeon require no special mention at this time. The right rectus incision should be preferred. I have no time for the muscle-splitting McBurney incision, which I have long since discarded.

LATE CASES

We come now to late cases where the infection has soiled the peritoneum or has contaminated the extra peritoneal cellular tissue, with or without abscess formation.

It is to this class I wish especially to direct your attention. It is a sad commentary on the teachings of the day that so many of these late cases are permitted to occur. Remember, gentlemen, that all late cases were at one time early cases, but I can recall but few late cases ever becoming early ones.

I would classify the late cases into five main groups:

1. Early rupture into the free peritoneal cavity without intestinal distention or visible changes in the peritoneum.

Remove the appendix in the usual way after packing off the intestine with large NaCl moist pads, using the utmost gentleness. Particular tenderness is required in drying out the Douglas cul-de-sac. Then close the abdominal wall without drainage of the peritoneum.

2. Later ruptures into free cavity with evidence of spreading peritonitis and distending intestine.

Remove the appendix as in No. 1. Dry out as before with moist gauze. With freshly gloved hand reach up and grasp the jejunum high up and deliver into the field, and with an intestinal clamp or the assistant's fingers, shut off a segment of the gut long enough to insert a rubber tube or catheter, first placing a No. 0 plain catgut suture through and through the gut and also through the tube, then tie. One or two more 0 chronic purse-strings complete the enterostomy. The tube being closed at the distal end is now grasped by long dressing forceps (author exhibits tubes with one end closed) after its passage through the omentum and brought out through a stab wound made about one and one-half inches above and two and one-half inches to the left of the umbilicus. *The parietal peritoneum is now closed without attempt at drainage of the general cavity.*

3. Rupture into adhesions or post-cecal position, with or without small abscess contaminating the cellular tissue outside the serous membrane.

Thorough walling off here is of vital importance before any attack is made on the appendix itself, even the abdominal muscles and fat should be well protected. If an abscess is encountered under the bowel this should be opened and dilated with the finger. All pus and fluids are thoroughly wiped out. A gauze strip saturated with tincture of iodine, 10 per cent, is swabbed throughout the necrotic cavity to be followed by alcohol. The appendix or its remains is then removed, preferably by ligating at the cecum with forceps applied to the proximal end of the appendix and then working downward. It is indeed surprising the ease with which one may complete the operation otherwise quite difficult. The cavity is again dried. After a change of gloves a combination large cigarette drain and small tube is inserted well into the septic cavity, and completely filling its exit into the free peritoneum. (Exhibition of tubes) A 00 plain gut is placed here and there in the bowel and also into the posterior peritoneum and then tied about the drainage material. Again cleansing the field, all gauze is removed and the peritoneum closed (after glove changing) *with no drainage of the peritoneal cavity.* When leakage from the septic pocket is anticipated, a good-sized tube inserted and resting at the bottom of the pelvis is advocated as a safe protective measure against pelvic abscess formation, not, however, with any idea of draining the general cavity. In this class with distention of small intestines our modified McKinnon jejunostomy is performed.

4. Very large walled-off abscesses capable of extraperitoneal drainage.

These should be drained in the old-fashioned way. And here and here alone the muscles-splitting operation is occasionally advisable.

5. The almost moribund case, with marked distention and ileus, fecal vomiting, thready pulse, muttering delirium, etc.

Under local anesthesia a high jejunostomy by means of the No. 18 catheter or small tube through an inch and a half left-rectus incision alone should limit the surgical interference.

A reasonable delay in advising operation may be justified if the patient is in contact with hospital and competent surgeon, and such practice may be taught by authors and teachers residing in metropolitan or surgical centers without harm to those living in such communities. I sometimes think if our master teachers in surgery residing in cities like New York or Boston would reciprocate by spending a few weeks with those of us who fight on the firing line of either rural Iowa or Nebraska, their view point might be changed. I believe this training would stimulate them to advise the physician to advocate immediate removal of all acute abdomens to a place of safety.

While I do not advocate any surgical specialty, except perhaps in head and bone disorders, is not the late complicated ruptured appendix, coming on like a thunder bolt from a clear sky, deserving of our most earnest consideration?

HOT SHOTS

A complicated ruptured appendix may require a great deal more skill and judgment on the part of the operator than is necessary to exhibit in the ordinary thyroidectomy.

The mortality in the latter is practically zero in competent hands and the convalescence little more severe than in tonsillectomy, and yet men who would not dare approach a goitre rush in on the desperate and complicated appendix.

I believe that, with rare exceptions, all appendices acutely affected should be operated on.

I have many times regretted operating too late but never too early.

After all, if every case were operated on early there would be no mortality nor would there be an excuse for this paper.

I would rather be wrong early than right too late.

I would rather operate early and perform a minor operation than later and do a major operation.

Delay transforms minor operations into major executions.

Early operations spell life. Late operations may spell death.

A low mortality rate in late cases should be the criterion for estimating the surgical skill of the operator.

I would rather have my nurse assistant remove my appendix early than have the most accomplished surgeon operate in the presence of general peritonitis and toxemia.

The surgeon who operates only in the first twenty-four hours of the disease deserves little credit for a zero mortality. It is an acknowledgment of his lack of faith in his own ability when he permits these late cases to die without operative interference.

A good operator with a statistical mortality complex shares equal condemnation with the mediocre surgeon who fails to recognize his limitations.

AUXILIARY DEFENSES

In all late cases (ruptured) irrigation of the stomach before and after operation, always at stated intervals.

Extreme Fowler position. Normal salt solution 500 to 800 c.c. under the skin every five hours or stronger salt solutions, intravenously, as advocated by Orr and Hayden. Glucose per rectum, either by drop method or the interval injection of several ounces. Other than morphine no drug is called for in the efforts to revive the patient.

Multiple drainage of the abdominal wall down to, but not through, the peritoneum, of course is necessary in all late (rupture) cases. Rubber tissue envelopes containing small bundles of wick answer the purpose very well.

FINAL AND LAST SHOT

No human being should be permitted to die of appendicitis or its complications without a tube in his small intestine.

REPORT OF THE NORTHWEST CONFERENCE FOR CHILD HEALTH AND PARENT EDUCATION

Held in St. Paul, March 27, 28 and 29, 1928

Richard Olding Beard, M.D.
Emeritus Professor, University of Minnesota, Executive Secretary to the Conference
MINNEAPOLIS, MINNESOTA

To the Organizations Sponsoring the Second Northwest Conference for Child Health and Parent Education, held March 27, 28 and 29, 1928, and to the Members of the Joint Committee in general charge of the Conference:

The Executive Secretary presents this statement of the results of The Second Northwest Conference for Child Health and Parent Education.

Registration

In Conferences of this character registration is seemingly a precarious thing. People who are possessed of a ticket cannot be refused admission and there is no way to determine that they have or have not registered. Hence the value of registration rests upon the record of visitors which, so far as it goes, may be used as a means to intelligent publicity upon future occasions. It is not an index to the number in attendance.

These partial registration records, however, the ticket sales and receipts, together with a rough estimate of those present at any meeting, give a fairly close estimate of numbers. These figures indicate that some 3,300 people attended the Conference; with a probable total of 5,000 single admissions in all, at the eight main sessions, the seven luncheon round tables and the dinner meeting. This would suggest a somewhat larger individual attendance, but a less continuing attendance at the Conference sessions than in the Conference of 1927 in Minneapolis.

The Ticket Sales

Successful ticket sales are dependent upon a number of factors. These are (1) the publicity preceding the Conference; (2) the recognized reputation of the speakers; (3) the interest inspired by the subject matter of the program; and (4) the active canvass undertaken by ticket selling individuals or groups in the local community. In the judgment of your Secretary, the first three of these determining influences played as strong as, or even a stronger part than in the preceding year. Unquestionably the ticket sale failed of its full measure of activity.

The Ticket Sales Record

	1927	1928
Course Tickets	755	524
Single Session Tickets	2,689	1,814
Special Admission Tickets		430
Luncheon Tickets	1,221	1,270
Dinner Tickets	223	80
Total	4,888	4,118

The comparison of ticket sale figures in the two succeeding Conferences bears out these conclusions. The total luncheon attendance was reinforced by the men's luncheon introduced this year.

Educational Value of the Conference

Numbers are something of an index to the success of such a Conference. They attest, in this instance, the growing interest of the people in parent education, the increasing consciousness of their need. They show an extending appreciation of child study. The special effort put forth this year to interest fathers in the part they should play in the upbringing of the child was encouragingly successful. The attendance, in general, would seem to justify the continuance of an annual Conference in the Twin Cities. It may fairly be expected that the interest in these meetings will gradually extend into the State at large and into neighboring States. It is an educational influence of gathering power. Ad interim publicity should develop a more active interest in the younger group of mothers.

The Finances of the Conference

This sort of venture is still new. The business men of Saint Paul, nevertheless, responded very liberally in its support. There was no difficulty in securing a generous guaranty fund. Our experience has taught us much in methods of promotion. We have yet much to learn. Successful, from the business point of view, as such new enterprises go, the Conference should achieve a yet larger financial success. The financial statement follows:

Luncheon and Dinner Account

Receipts

By sale of Dinner Tickets	$ 160.00
By sale of Luncheon Tickets	1,005.25
	$1,165.25

Payments

Paid to the Saint Paul Hotel	$ 989.75
Paid to the St. Paul Athletic Club	160.50
	$1,150.25
Balance on hand	15.00
	$1,165.25

Conference Account

Receipts

By sale of Course Tickets	$1,572.00
By sale of Single Tickets	907.00
By purchase of Single Tickets with Ticket Gift Fund	412.50
By sale of Special Admission Tickets	107.50
By sale of Auditorium Boxes	450.00
	$3,449.00
By refunds on Tickets	14.50
	$3,434.50
By Exhibits and Literature a/c	238.05
By Miscellaneous Receipts	15.38
By Interest on Bank Account	78.75
By Gifts	620.96
	$4,387.64
Deficit	2,371.20
BALANCING ACCOUNT	$6,758.84

Expenditures

Postage	$ 238.14
Stationery and Supplies	220.19
Programs	212.32
Form Letters	44.15
Printing Tickets	42.00
Publicity	530.13
Clerical Services	2,414.84
Exhibits and Literature	334.74
Rental, Auditorium	612.40
Transportation & Misc. Expense	114.28
Speakers' Expenses	1,045.65
Speakers' Honoraria	950.00
TOTAL	$6,758.84

Guaranty Fund

Gift Subscriptions	$ 620.96
Guaranty Fund	9,600.00
	$10,220.96
Gift Subscriptions	$ 620.96
Refunds to Guarantors	7,228.80
Deficit	2,371.20
	$10,220.96

The full itemized statements of ticket sales, receipts from the several sources, expenditures, guaranty fund and refunds have been audited by the Comptroller of the Minneapolis Council of Social Agencies and are on file in the Minneapolis office of the Conference subject to the inspection of anyone who may desire to see them.

The Educational Results of the Conference

The Conference, energizing as it is, should be simply a seeding-time in the minds of mothers, fathers, teachers, physicians and public health nurses. It should bear leaf in a continuity of child study by study groups in parent-teacher associations, college clubs, women's clubs and mother's clubs throughout the year. It should come to flower in the publication of its program in book form for the further education of these groups. It should bear fruit ultimately in the development of a school of parent education.

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MINNEAPOLIS, JUNE 15, 1928

THE AMERICAN PSYCHIATRIC MEETING

"Thou Cosmic Movement Continuum!" This is the first sentence of The Behaviorist's Prayer, and is taken from the *Psychological Bulletin*, September, 1927, so it must be worth while. It further goes on to say: "We petition thee to lend auditory discriminations to these our laryngeal contractions. Lower the threshhold of thy sensory discriminations so that our neuromuscular-glandular activities do not expend themselves as wasted reflexes. May the alterations in the configurations of our pitifully finite electron-proton aggregates find sympathetic resonance in thy visual receptors."

The above is a very realistic idea of the recent meeting that was held at the Radisson Hotel in Minneapolis from Monday until Friday, June fourth to eighth, inclusive. Of course this psychiatric association covers a very wide field, and it is very necessary that we, as physicians, pay more attention to psychiatric medicine than to many of the other, and apparently simpler, complexes. Probably there is a good deal of discussion going on now as to the use of such big words, such scientific details, and such deep dissection of the innermost feelings of our patients; and yet, if the writer got one thing out of this meeting, it was that something that came from Dr. Karl A. Menninger, of Topeka, Kansas, in his discussion of the crime situation and its relation to psychiatry. He was very emphatic in his statements that this distinction of psychiatric subjects should not be left to the jury, to the court, and to the attorneys, but that he final analysis must be settled by the trained psychiatrist and that he and he only was able to determine what psychiatry really covered and what its relation to our physical and mental responsibilities meant.

The discussion and reading of papers on Thursday afternoon was a genuine treat. Dr. Walter Freeman, of Washington, told the American Psychiatric Association the result of his careful study of the records of 1,100 psychotic patients who had died in the last ten years. And he defined them as simply exaggerated examples of the people who can be found in most asylums or hospitals for the insane, a much better term, and, further, that they were instances of exaggerated examples of minor but queer idiosyncrasies exhibited by so-called normal individuals. Quite naturally the results of Dr. Freeman's analyses have a general limited application to the population, but they are evidences of what may be seen in odd disorders. Dr. Freeman defined and compared cancer, a small group of unruly cells multiplying in the body, with paranoia, a small group of ideas proliferating in the mind without regard to neighboring elements and finally destroying insight. He also called cancer "paranoia at the cellular level." He cited the instance of acute blood infections due to germs called streptococci which are likely to attack the paranoid type. High blood pressure and other diseases of the blood circulation system pick as their most frequent victims those abnormally active in both mind and body.

Dr. George W. Henry, of White Plains, New York, the author of "Essentials of Psychiatry," reported studies that showed disease germs supposed to cause the mental troubles occur in the teeth of normal people as frequently as in the insane.

Dr. Ross McChapman, Superintendent of the Sheppard and Enoch Pratt Hospital in Maryland, wondered why there were so few psychiatrists, too few psychiatrists, and why the courses of study in our medical colleges are so arranged that psychiatry is not presented to the student in a way to attract him. Furthermore, that there was no field of medicine which was so interesting as psychiatry and the study of human beings.

Again, Dr. Menninger emphasized he necessity of the study of the individual as a whole early in life and before it was necessary to confine the psychotic or the suspected potential criminal on the ground of criminal offenses. That the study of traits of character, of inherent qualities, and early training or lack of training, should be made the basis or groundwork of the investigation of each case. He cited a number of cases in which a determined study of the individual would explain the future development and tendencies that the patient inherited or was likely to succumb to.

This leads us into the realm of the psychoanalytic processes, which have been so widely explained and upon which numerous papers were presented. A profound student of psychoanalytic questions must devote himself to long study of this condition. It is not something that can be taken up and read in a few moments from any work on psycho-analysis, but must be continued over a number of years before anything definite can be determined from it. The study of personality in all of its phases is the work of the psycho-analyst. Some psychiatrists are evidently endowed with a keener insight of the individual than the pschiatrist of the usual type; others are plodding and painstaking and somtimes get intricately involved.

It is necessary, however, to keep this one fundamental idea in mind, that we do not examine personality make-up of offenders when premonitory symptoms of social maladjustment are exhibited, but only after the extreme violent and irretrievable explosions have occurred.

The last of the triad belongs to the psychopathological group in which these disorders are carried to a final conclusion by examining into the pathology of the individual. Dean Roscoe Pound, of the Harvard Law School, talked on this subject and criticised the plea of insanity, which he believed was largely devised as a means whereby court and jury, in response to popular demand, could exonerate a man who killed in defense of the honor of some woman of his family; and he exhibited this as one of the great difficulties between the bar, the bench, and the scientific experts. Dean Pound pictured the country court as one of the chief amusements of the rural district of which it was the center, and said that the contest work of the courtroom substituted for the baseball contest of to-day put a premium on skillful legal fencing and developed a set of artificial rules for the conduct of the game.

Dr. William J. Mayo, who assisted in the welcoming of this association, was very emphatic in his attitude toward the present defenses set up for the liberation of the criminal and he was equally emphatic in criticizing medical men who made it their business to retard justice and prevent the carrying out of legal measures which would justify them in their conclusions.

Dr. Adolph Meyer, the president of the American Psychiatric Association, presided in his usual delightful manner and gave an address full of interesting suggestions. There were approximately 300 in attendance, and on the evening of Thursday they were entertained at a dinner and were addressed by Miss Burchanel; after the dinner Miss Burchanel introduced a method of dancing which was designed to entertain, amuse, and interest the psychotic cases.

The epileptic was not forgotten at this meeting and there were two or three very interesting papers, particularly those of Dr. Karl A. Menninger, of Topeka, and Dr. Franklin G. Ebaugh, of Denver. Dr. Arthur F. Kilbourne, of Rochester, Minnesota, read a very interesting paper on "Minnesota and Its Development of the Care of Its Insane." Numerous other papers were read and will be commented on at some future time in these pages.

Twenty members of the American Psychiatric Association have died during the past year.

TUBERCULOSIS WORK IN MINNESOTA

In 1861 Henry David Thoreau, the naturalist, came to the State of Minnesota to have his tuberculosis treated climatically. It was then that Minnesota, particularly St. Paul, was said to be a wonderful climate for the treatment of tuberculosis. About 1874 Edward Livingston Trudeau came to St. Paul to have the climate aid in the treatment of his tuberculosis. About the same time Doctor Boothby was advised by his physician in Maine to locate within fifty miles of the city of St. Paul. He was also seeking a cure for tuberculosis.

Before the days of Thoreau and since the days of the arrival in St. Paul of Trudeau and Boothby large numbers of people have come to this region to be treated for tuberculosis. They carried with them billions of tubercle bacilli, and in some instances they left infected children with the result that this section of the country later had an extremely high incidence of tuberculous disease, so high in fact, that something had to be done to help reduce the death rate.

More than twenty-two years ago the first private sanatorium was established by Doctor H. Longstreet Taylor, of St. Paul. His institution was located at Pokegama, Minnesota, and from that time to this has done a tremendous amount of good in controlling tuberculosis. About twenty-two years ago the Christian family of Minneapolis established a sanatorium under the name of Thomas Hospital, which has since been operated by the Fairview Hospital, and this institution has done a great deal of good.

In 1904 the National Tuberculosis Association was organized and since that date a tremendous amount of information has been given out to the public. It stimulated the organization of local societies. Minnesota was not slow to take up this movement, for only two years after the National Association was organized a Minnesota State Tuberculosis Association was in existence. This organization, on the suggestions of Doctor Taylor, did all that it could to educate the public concerning the control of tuberculosis with the result that a county sanatorium law was enacted which has led to the building of more than a dozen different county and state sanatoriums. These are tax-supported institutions. The Minnesota State Tuberculosis Association later changed its name to the Minnesota Public Health Association, and this organization has gradually increased its work until it has componet organizations in most of the counties of the state. This has done much to stimulate interest in the development and maintenance of institutions for the tuberculous.

In 1921 the city of Minneapolis, through the direction of Doctor F. E. Harrington, established a special school for tuberculous children known as *Lymanhurst*. This institution has helped a great deal in educating the parents of children regarding the dangers of tuberculosis. It has also served as an example to many other cities and counties throughout the United States.

In recent years the University of Minnesota has seen the importance of teaching diseases of the chest so that at the present time its curriculum contains excellent courses in tuberculosis and closely allied subjects. It is also devoting considerable time to the teaching of pupil nurses, as well as medical students.

A great step has recently been taken in this state by some of the general hospitals that have opened their doors to the tuberculous. There is no scientific reason why they should not have done so a long time ago, but prejudice and superstition have now been broken down in several of them, and they are accepting tuberculous patients as they accept patients suffering from other chronic diseases. In this respect Minnesota is nearly as far advanced as any other state in the nation.

NEWS ITEMS

Dr. J. H. Fried has moved from Ada, Minn., to St. Paul.

Dr. H. A. Crecilius has returned from Lakeport, Calif., and resumed practice at Volin, S. D.

Dr. James F. Lynn, of Waseca, Minn., is the Democratic candidate for Congress from that district.

Dr. L. W. Krueger has resumed practice at Mapleton, Minn., after a year's absence at Kansas City, Mo.

The Northern Hospital at Glendive, Mont., is to be enlarged at an expenditure of $75,000, just authorized.

Dr. James C. Clark, of Sioux Falls, S. D., was acquitted in the Circuit Court of a charge of malpractice.

Dr. Homer A. Davis, of Amidon, N. D., was married last month to Miss Apolonia Thomas, also of Amidon.

The eighty-fourth annual meeting of the American Association of Psychiatrists was held in Minneapolis the past week.

Dr. Frank J. Heck, of Rochester, on the Staff of the Mayo Clinic, was married last month to Miss Ruth E. Vories, of Pueblo, Colo.

Dr. Frank S. Bissell, of Minneapolis, leaves for Europe next month to visit the clinics and study the new work done in the *x*-ray line.

Dr. Henry H. Blaustone has just returned from the East. He spent some time in Philadelphia and Cleveland doing post-graduate work.

Dr. John F. Fulton, Jr., son of Dr. John F. Fulton, of St. Paul, is returning to England to work in Oxford, for several years, where he was educated.

The Institute of Child Welfare of the University of Minnesota has received an additional gift of $665,000 from the Laura Spelman Rockefeller Memorial.

Drs. H. O. Skinner and Eugene Hubbell, of St. Paul, will present papers at the annual meeting of the American Institute of Homeopathy, to be held in Pittsburg next week.

The new addition to the West Side Hospital of St. Paul was dedicated last month. The addition cost over $100,000, and it increased the capacity of the Hospital to 106 beds.

Dr. Leo. G. Rigler and Dr. Walter H. Ude have taken charge of the *X*-ray Department at The Eitel Hospital, succeeding Dr. Frank S. Bissell, who expects to leave for Europe in July.

Dr. L. A. Weissberger, of Toronto, Canada, has joined the Clinic of Drs. Vogel and Seifert at New Ulm, Minn., which will be known hereafter as the Drs. Vogel, Seifert & Weissberger Clinic.

Dr. A. R. Hall, of St. Paul, who has been absent from the city for the past year engaged as an instructor in Columbia University, New York City, has returned to St. Paul and will resume practice there.

St. Mary's Hospital School of Nursing, Rochester, Minn., will hereafter receive students from other schools of nursing who wish to extend their training beyond that received in their regular course elsewhere.

The first physician to go to the State Medical Association of North Dakota by air route, was Dr. H. M. Erenfeld, of Minot, who went by airplane from Minot to Devils Lake to attend the annual meeting last month.

Dr. Frank G. Landeen, of Stillwater, died last month at the age of 56. Dr. Landeen graduated from the Medical School of the University of Minnesota, class of '94, and had practiced in Stillwater for a third of a century.

The Hennepin County (Minneapolis) Tuberculosis Association is celebrating its twenty-fifth (silver) anniversary to-day. Dr. Linsly R. Williams, managing director of the National Tuberculosis Association, is on the program for the principal address.

As this issue of THE JOURNAL-LANCET goes to press the meeting of the American Medical Association is getting under way in Minneapolis with a very large attendance, and the facilities for meeting the Association in the new auditorium building are amply demonstrated.

Dr. John D. Graham, who has been associated with Dr. Fawcett, of Starkweather, N. D., for a couple of years, has formed a partnership with Dr. W. F. Sihler, of Devils Lake, N. D. Dr. Graham is a Toronto man, class of '23, and has specialized in obstetrics and children's diseases.

A special meeting of the state chairman and executive committees of Minnesota, Wisconsin, Iowa, Nebraska, and Missouri, of the American Society for the Control of Cancer, was held at the Memorial Cancer Institute, University of Minnesota, June 12. Dr. George A. Soper, managing director of the Society, with headquarters in New York, presided at the meeting.

On June 18, St. Andrews Hospital, of Minneapolis, begins a drive to raise $100,000 to finance the building plans and the work of this much needed institution. Its work commends it highly to the citizens of Minnesota, and it is safe to predict that the campaign will be successful.

Dr. H. A. Roust has sold his practice in Ruthton, Minn., to Dr. H. L. Sargent, of Fergus Falls, and moved to Montevideo.

At the annual meeting of the Redwood-Brown Medical Society, held last month at New Ulm, addresses were made by Drs. George Earl and E. A. Meyerding, of St. Paul. Officers for the current year were elected as follows: President, Dr. Geo. B. Weiser, New Ulm; vice-president, Dr. C. A. Saffert, New Ulm; secretary-treasurer, Dr. W. A. Meierding, New Ulm; delegate to state convention, Dr. F. H. Dubbe, New Ulm.

The annual meeting of the American Radium Society was held in Minneapolis during the week of the American Medical Association conference. A special cancer clinic arranged by Dr. A. C. Strachauer and Staff was conducted at the Memorial Cancer Institute, University of Minnesota, June 11, 3 P. M. At the banquet of the American Radium Society, held at the Hotel Radisson, June 11, 6:30 P. M., the speakers were Dr. W. J. Mayo, Rochester, Dr. A. C. Strachauer, Minneapolis, and Dr. S. C. Lind, Minneapolis.

Annual Meeting of the Sioux Valley Medical Association

The thirty-third annual meeting of the Sioux Valley Medical Association will be held on Wednesday, June 27, at Sioux Falls, S. D.

The following is the program to be presented:

Morning Meeting, 10:00 A. M.

1. Call to order. Reading of Minutes.
2. Reports of Officers and Committees.
3. New and unfinished business. Election of Officers.
4. Address: "Some High Spots in the Diagnosis and Treatment of Pulmonary Tuberculosis" (Lantern slides), Dr. Everett K. Geer, St. Paul, Minn.

Afternoon Meeting, 1:30 P. M.

1. Address: "The Pathology of the Hip Joint" (Lantern slides), Dr. Karl R. Werndorff, Council Bluffs, Iowa.
2. Address: "Renal Tuberculosis" (Lantern slides), Dr. Nathaniel G. Alcock, Iowa City, Iowa.
3. Address: "When and When Not to Operate in Acute Biliary Disease" (Lantern slides), Dr. Alfred Brown, Omaha, Neb.
4. Address: "Functional Insanity," Dr. George Donahoe, Cherokee, Iowa.

Location or Substitute Work Wanted

By an experienced physician. Address 485, care of this office.

Assistant Wanted

In a large general practice. Apply to W. C. Fawcett, M.D., Starkweather, N. D.

North Dakota Practice for Sale

A $6,000 cash practice and a paying drug-store in connection. Address 464, care of this office.

Position Wanted by Laboratory Technician

Can do all work required of a technician in hospital or clinic, except Wassermanns. Highest testimonial given. Address 471, care of this office.

For Sale

Stereoscope and Allison Operating Table; suitable for office use. Call Main 7879, Minneapolis, between 9:00 and 12:00 a. m., or address 484, care of this office.

Nurse Wants Position

A competent nurse with several years of hospital management experience desires position of merit in doctor's office, clinic, or hospital. Address 490, care of this office.

Specialist Wanted

A young eye, ear, nose, and throat man, preferably a Scandinavian, by a small group of Twin City men. Salary at start, leading to partnership. Address 469, care of this office.

Laboratory Work Wanted

By thoroughly competent young woman trained in large hospital. Has organized two schools. Also efficient in Diathermy and Alpine Lamp work. Address 480, care of this office.

X-Ray Unit for Sale

X-Ray Unit, bedside, or portable model, complete with new Coolidge tube, oil immersed transformer in A-1 condition at a very reasonable price. Address 486, care of this office.

Offices for Rent

Office space and living rooms over drug-store in Midway District of the Twin Cities. Centrally located; good location for full-time position. Call Midway 0726 or address 481, care of this office.

Good Practice for Sale

Well established lucrative practice in excellent office in best city in North Dakota will be turned over to purchaser of office equipment. ($500.00 only). Going to larger city to specialize. Address 483, care of this office.

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A splendid opening for a German-speaking physician in North Dakota. Large prosperous territory; no competition, with collections 95 per cent. This place will bear investigation as there is nothing to buy. Address 482, care of this office.

For Sale

Well-equipped office. Reasonable rent. Large practice, established since 1905. Doctor deceased. Modern town of 700 with sewer, city water, electric lights, gravelled streets. Forty miles to nearest large town. Address Mrs. J. E. Schwenden, Bryant, S. D.

Opening in Minnesota for Young Man

Have fine location for young Scandinavian or German physician and surgeon either as assistant or partner. Might even sell out as age begins to weigh on me. Have unusually well equipped offices and a small hospital with modern equipment in connection with offices. Address 475, care of this office.

Practice for Sale

Good practice and completely equipped in a double practice in Central Minnesota towns with population of 3,000 people. Practice last year $12,000.00. Collections 95 per cent. Best of churches and schools. Situated on two busy trunk highways, convenient to local hospitals and three hours from Minneapolis. Reason for sale, am taking fellowship. Address 488, care of this office.

Work Wanted

Physician, 33 years old, married, desires assistantship or partnership to a doctor with large obstetrical and surgical practice. Licensed in Iowa and North Dakota. Five years successful country practice. Reasons for desiring change: poor collections, oldest child beginning school. Applicant has some hospital training. Strictly ethical. Speaks German and French. Ready to leave November 1, 1928. Address 487, care of this office.

Equipment for Sale

Prometheus electric sterilizer, large size, with 3-heat switch and automatic cut-off; separate compartments for sterilization of instruments and dressings, mounted on white enamel tubular steel stand; may be used on direct or alternating current. Used but little. Good as new. Cost $86.50 f. o. b. factory. Will sell for $50 plus freight. Baldwin operating table complete with full leatherette reversible cushion, removable shoulder rests, knee slings and heel rests. Is of heavy tubular steel construction with white enamel finish. Has central slot and sliding drainage tray and drip basin. May be used for all work. Cost $85 f. o. b. New York. Will sell for $50 plus freight. Address 489, care of this office.

EXAMINATION REPORT, MINNESOTA STATE BOARD OF MEDICAL EXAMINERS, APRIL, 1928

BY EXAMINATION

Name	School and Date of Graduation	Address
Aling, Charles A.	Univ. of Minn., M.B., 1928	1104 W. Minnehaha Pkwy, Mpls.
Allen, Philip King	Wash. Univ., Mo., M.D., 1927	949 Marshall Ave., St. Paul, Minn.
Bain, Charles Grant	Dalhousie, M.D., 1919	Mayo Clinic, Rochester
Beaver, Meredith G.	Univ. of Ore., M.D., 1926	No. 4 Sutherhill Apt., Rochester
Bliss, Theodore Liston	Univ. of Mich., M.D., 1926	Mayo Clinic, Rochester, Minn.
Boeck, Wm. Charles	Harvard, M.D., 1926	Mayo Clinic, Rochester, Minn.
Bowen, Sarah	Univ. of Minn., M.B., 1927	c/o Olive Jones, 468 Santa Fe. Road, Olathe, Kansas
Buckley, Robert Peers	Univ. of Minn., M.B., 1928	1511 E. Superior St., Duluth, Minn.
Bumpus, Laurin Dudley	Harvard, M.D., 1926	Mayo Clinic, Rochester, Minn.
Carmichael, Hugh Thompson	Queens, M.D., 1923	Mayo Clinic, Rochester, Minn.
Carrow, Roland A.	Creighton, M.D., 1927	St. Mary's Hosp., Minneapolis, Minn.
Cave, Harry Allan	Univ. Western Ont., M.D., 1925	Mayo Clinic, Rochester, Minn.
Clawson, Thomas Alfred, Jr.	Univ. of Md., M.D., 1924	Mayo Clinic, Rochester, Minn.
Coleman, Julian Harwood	Univ. of Va., M.D., 1925	Mayo Clinic, Rochester, Minn.
Dredge, Thomas Everett	Univ. of Minn., M.B., 1928	Oak Terrace, Minn.
Edwards, Joseph Willard	Univ., of Minn., M.B., 1927	Chicago Memorial Hosp., 660 Groveland Park, Chicago, Ill.
Fauster, John Ulrich, Jr.	Univ. of Mich., M.D., 1926	Mayo Clinic, Rochester, Minn.
Fawcett, Keith R.	Univ. of Minn., M.B., 1928	St. Mary's Hosp., Duluth, Minn.
FitzGibbon, Thomas Grattan	Creighton, M.D., 1924	Mayo Clinic, Rochester, Minn.
Hendricks, Esten	Univ. of Minn., M.B., 1928	1101 14th Ave. S. E., Minneapolis
Kilgore, Geo. Lester	Emory Univ., M.D., 1926	Mayo Clinic, Rochester, Minn.
Lineberry, Ellis Dice	Univ. of Va., M.D., 1926	Mayo Clinic, Rochester, Minn.
Lund, Werner John	Univ. of Minn., M.B., 1927	62 Melbourne St., Minneapolis, Minn.
Millbrook, May Irene	Univ. of Minn., M.B., 1927	University Hosp., Minneapolis, Minn.
Mulholland, Stanford W.	Univ. of Mich., M.D., 1925	Mayo Clinic, Rochester, Minn.
Oleisky, Elmer	Univ. of Minn., M.B., 1927	609 Oak St. S. E., Minneapolis, Minn.
Pohl, John Florian	Univ. of Minn., M.B., 1928	1717 1st Ave. S., Minneapolis, Minn.
Rathman, Omer Charles	Univ. of Mich., M.D., 1926	Mayo Clinic, Rochester, Minn.
Rogers, Jas. Creighton T.	Rush, M.D., 1927	Mayo Clinic, Rochester, Minn.
Rupp, Alice	Univ. of Minn., M.B., 1928	501 Wash. Ave. S. E., Minneapolis
Schacht, Frederick Wm.	Johns Hopkins, M.D., 1926	Mayo Clinic, Rochester, Minn.
Spackman, Edward Victor	Univ. of Minn., M.B., 1927	Ancker Hospital, St. Paul. Minn.
Spooner, Christopher M.	Univ. of Manitoba, M.D., 1925	Mayo Clinic, Rochester, Minn.
Tasche, Leslie Wm.	P. & S., New York, M.D., 1924	428 2nd St. S. W., Rochester, Minn.
Thompson, Willis Herbert	Univ. of Minn., M.B., 1928	509 5th St. S. E., Minneapolis, Minn.
Vanzant, Frances Ralston	Univ. of Texas, M.D., 1926	Mayo Clinic, Rochester, Minn.
Wilkinson, George Lewis	Univ. of Minn., M.B., 1928	St. Mary's Hosp., Duluth, Minn.

BY RECIPROCITY

Abbott, Walter Dayton	Creighton, M.D., 1926	Mayo Clinic, Rochester, Minn.
Anderson, Aldor Gustav	Marquette, M.D., 1927	Taylor, Wisconsin
Anderson, Richard Speight	Univ. of Md., M.D. 1924	Mayo Clinic, Rochester, Minn.
Benjamin, MacBroom	Marquette, M.D., 1927	Jasper, Minn.
Christensen, Eli Elisman	Univ. of Iowa, M.D., 1926	428 4th St. S. W., Rochester, Minn.
Coakley, Leo Patrick	Creighton, M.D., 1926	Mayo Clinic, Rochester, Minn.
Down, Howard Ivan	Univ. of Ill., M.D., 1926	Mayo Clinic, Rochester, Minn.
Esser, Oscar John	Marquette, M.D., 1927	Gibbon, Minn.
Holderman, Jacob Wm.	Rush, M.D., 1918	25 N. 10th Ave. E., Duluth, Minn.
Joyce, George Leo	Loyola, M.D., 1927	Stewartville, Minn.
Kemp, Milburn Watts	Toronto, M.B., 1920	State Hospital, Fergus Falls, Minn.
Kerschbaumer, Luisa	Univ. of Vienna, Dr. of Med., 1918	State Hospital, St. Peter, Minn.
Murphy, George Thomas	Rush, M.D., 1925	819 4th St. S. W., Rochester, Minn.
Nelson, Wallace LeRoy	Northwestern, M.D., 1927	Mayo Clinic, Rochester, Minn.
Reuter, Maurice Jerome	Marquette, M.D., 1924	Mayo Clinic, Rochester, Minn.

CREDENTIALS NATIONAL BOARD

Cooper, Finis Gaston	Rush, M.D., 1925	Mayo Clinic, Rochester, Minn.
Schanche, Arthur Norman	Wash. Univ., Mo., M.D., 1925	Hills, Minnesota

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MANAGEMENT AND OPERATIVE TREATMENT OF PELVIC INFECTIONS OF THE FEMALE*

By Arthur E. Benjamin, M.D.
Assistant Professor of Gynecology and Obstetrics University of Minnesota
MINNEAPOLIS, MINNESOTA

When a large percentage of cases of pelvic infections of the female occupy the wards of our municipal hospitals, they become an economic burden to the public, and, when statistics show that about 80 per cent of these are due to Neisserian infection, they become a social problem, as well.

In this paper inflammatory diseases of the upper genital tract that are due to gonococci streptococci, staphylococci, and colon bacilli will be considered. Tubercular infections of the pelvis will be discussed incidentally. The management and treatment of these cases as carried out in the services of Dr. F. L. Adair and myself at the Minneapolis General Hospital will be emphasized with especial reference to personal experiences.

A quarter of a century ago few surgeons employed all of the laboratory methods of the present day to determine the resistance of the patient and the virulence of the infection; therefore the mortality rate from operation was comparatively high. No universally adopted method of management and operative procedure had been followed in these cases. Progress has been made, however, and an intensive study is gradually massing statistics to guide the present-day clinician and surgeon.

We often find a mixed infection of staphylococci with gonococci or colon bacilli. The infection with colon bacilli is usually secondary from the contiguous bowel, which may be adherent to a cystic ovary or diseased tube, in which case there is often a tuboövarian abscess.

In gonorrheal infections the clinical symptoms, history, laboratory findings, and white-cell count (from 15,000 to 25,000) will usually make a diagnosis comparatively certain.

The adnexal pain is quite characteristic when the disease continues up the tubes and the peritoneum is reached. Nausea, vomiting, and distention may occur if the bowel is involved.

In streptococcic infection the symptoms are more acute and general with occasional chills and a rapid rise of temperature, the leucocyte count being between 25,000 and 40,000 with a high proportion of polymorphonuclears. A blood culture is advisable when streptococcic infection is suspected and may save an operative mortality, as an operation performed where there is a virulent blood infection may be useless.

Complicating conditions must not be lost sight of because of the possibility of acute appendicitis, thrombophlebitis, ectopic pregnancy, and obstruction of the bowel that may demand immediate operation. Occasionally, perforated duodenal ulcer, twisted pedicle of an ovarian cyst, or acute hemorrhagic ovary may be confounded with a low-grade infection.

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*Read before the Western Surgical Association, Omaha, Nebraska, December 8, 1927.

PRELIMINARY TREATMENT

In Neisserian infections James V. Ricci[1] advises waiting three months after the onset of acute attacks, as he believes that pelvic suppuration is a self-limited disease and that pus undergoes resolution. He says that 1,250 out of 1,500 cases of inflammatory disease of the tubes were without pus or bacteria. He also states that the pathology of pelvic suppuration causes, first. disappearance of bacteria, and, second, disappearance of pus.

"There was less than 1 per cent mortality of chronic non-purulent cases. There were 33 out of 240 cases mortality in the purulent cases. There was no shock, and the febrile reaction was not over 103.4° in the non-purulent cases. 85 per cent went home by the end of the twenty-fifth day post-operative. In the purulent cases 13 per cent had shock, 12 per cent had over 105.4° febrile reaction, there were four deaths, prolonged convalescence, and 30 per cent went home by the end of the twenty-fifth day."

Jarcho[2] has used cow's milk in many cases. "Diathermy," he says, "gives relief and stops pain in 66 per cent of the cases." He thinks that the operative mortality can be reduced to 3 per cent if the temperature is normal in three to ten days and the white count is below 16,000.

Keller[3] states that in the Strassburg Clinic inflammatory recurrences are rare after conservative treatment. He delays operation as long as possible, so that in the operative case a line of demarcation between healthy and diseased tissue is present.

Hartmann[4] emphasizes the conservative treatment, giving gonorrheal vaccine, protein therapy, and diathermy. He obviates operation in the acute stage, but believes it is indicated in the chronic. He believes that the social condition and age should be taken into consideration. In 353 cases 117 were treated surgically with 3 deaths; 81.28 per cent recovered, and of the conservative treatment 55.5 per cent recovered. He is of the opinion that the conservative treatment is often overdone.

Thomas H. Cherry[5] reports 1,105 cases of pelvic infection in Harlem Hospital, where 88 per cent were gonorrheal infections and 12 per cent were due to other causes. He finds the use of proteins unsatisfactory. Diathermy was palliative and more successful than the others. It caused a resolution in 66.6 per cent and relieved pain in practically 100 per cent. He does not believe in treating acute attacks of adnexal inflammation surgically, as they spontaneously subside. In recurrent attacks the arguments for surgical intervention are logical and it gives a mortality of 3 per cent. If the temperature remains normal from three to ten days he operates, but he does not use abdominal drainage.

Miller's[6] preliminary treatment consists of rest in bed until the temperature is normal for ten days, and when the operation is performed both tubes are usually removed and the ovaries conserved. He states that the operation is less tedious and dangerous, complications fewer, mortality lower, and 82 per cent are complete cures. "The only argument for early operation is expediency."

Henry Schmitz[7] believes that by the conservative treatment 65 per cent of the cases become permanently well inside of a year, 20 per cent have slight disability, 15 per cent remain invalids, and surgery is indicated in 15 per cent. He also believes that surgery should not be considered except for the relief of the sequelæ, such as adhesions, sterility, and so forth.

F. G. Dubose[8] advises operation where there are progressively unfavorable symptoms during the period of rest. If there are a sudden relief of pain and sense of improvement accompanied by increase in pulse rate and occasional lowering of temperature, he believes it may indicate a thrombosis or rupture of localized abscess; where there is a sudden falling in the previously high leucocyte count and an increased polymorphonuclear, a failing resistance is indicated; and when a mass appears in the pelvis as a localized abscess, operation is indicated. He does not advise operation if the condition is stationary or improving with a low polymorphonuclear and leucocytosis or during the first seven days, when the severity of peritonitis is at its height. Operation should be deferred in such cases until all general acute symptoms have subsided.

Royster[9] believes that in an infectious process in a closed tube the infection loses its virulence, dies out, and becomes sterile in 70 per cent of the cases. He believes that an old infected tube with sealed extremities results in hydrosalpinx. A pyosalpinx may be a source of metastatic infections, however.

G. H. Reese[10] advises operation when the temperature and pulse reach normal He defers operation if the patient's temperature or blood shows a rise after pelvic examination and walking around the wards.

Thomas J. Strong[11] is of the opinion that Neisserian and streptococcic infections cause sterility, adhesions, and chronic invalidism and believes that surgery alone can effect complete cures in chronic salpingitis.

Victor Bonney[12] believes that these cases should be operated on at the earliest possible moment.

M. P. Neal[13] depends upon the leucocyte count as a guide in operative work. A falling total count with a rising polymorphonuclear demands immediate operation. "A falling count may indicate overwhelming or broken resistance by a massive highly virulent infection, a spreading fulminating infection, thrombosis of the vessels, or gangrene."

Ahlström[14] had a mortality of 0.4% in only gonorrheal cases demonstrating that gonorrheal infections are less dangerous than other infections. He operates in the acute stage only on appearance of life-threatening conditions and follows the expectant treatment in all cases where it is possible. He had a mortality of 2 per cent when following this treatment. Excluding post-partum salpingitis and cases of septic abortion, the mortality was only 0.9 per cent. He is of the opinion that only septic salpingitis calls for an operation during the stage of fever.

By conservative treatment the same surgeon says that 77 per cent of the patients were cured, 6 per cent had slight complaints, 16 per cent had recurrences, and 6 per cent had become pregnant. Some of these cases were treated conservatively by drainage of the abscess cavity.

It is a well known fact that the class of cases treated in our municipal hospitals for pelvic infections are of the wandering type, drifting from one city to another with no permanent abode, many having been treated or operated on elsewhere; therefore reliable statistics are difficult to obtain.

Our usual management of cases of pelvic infection as they appear is rest in bed, at times no food for a few days or liquid or semisolid diet, ice or hot water bag to the abdomen, and sedatives where necessary. Intra-abdominal tension is minimized. Occasionally, the face position is used. This lessens the distention and the massing of the diseased adnexal tissue in the apex of the pelvis. The temperature being rather moderate antipyretics are seldom used. When the temperature and leucocyte count remain comparatively low after the patient has been examined and allowed to move about the ward, an operation is found safe and is advisable except in those cases where an apparent recovery has taken place and the patient feels well. These cases are instructed to report at the dispensary later. Protein therapy and other recognized forms of treatment to favor resolution have been employed.

OPERATION

Occasionally an abscess forms in the cul-de-sac and requires vaginal drainage, but, later, when the temperature and leucocyte count are normal and the patient is in good general condition, a laparotomy is usually performed. I believe the majority of such cases have to have the tubes and any diseased portion of the ovaries removed before a permanent cure is assured, because of fixed and diseased adnexa and a displaced uterus. An operation is performed to remove permanently diseased tissue, and to replace the uterus; otherwise a recurrent abscess often follows or suffering continues. A complete removal of the diseased tubes is justified, especially in persons of the class that usually frequents our municipal hospitals and dispensaries.

No doubt, recurrences and morbidity are increased because of faulty technic. In several cases where it has been the writer's duty to do a secondary operation in which one or both tubes have been previously removed by another surgeon, it has been found that, in the majority of such cases, too conservative an operation has been attempted or the technic has been faulty. The careless handling of the viscera, the spreading of more or less infectious material, undue traumatism, or the incomplete removal of all diseased tubal tissue may be responsible for many subsequent symptoms.

It was only after many experiences that the writer observed that it is in cases of imperfectly removed tubes with the cornual portion remaining that adhesion to contiguous organs occurred, and thereafter this portion was dissected out.

The plan of the operation is quite important. It has been our habit to use local, gas, and ether. While the patient is taking the gas, ethylene being preferred, a local anesthetic is given. The anesthetist may switch onto ether or continue with ethylene throughout the whole operation. Caudal anesthesia is occasionally used in willing and suitable patients.

I personally prefer a one-yard square rubber dam to pack off the intestines, the rubber being less irritating to the endothelium and prevents the evaporation of heat.

The gall-bladder, stomach, and appendix are usually explored, as it is quite essential to know of any complicating condition or any unusual pathology present.

I believe it is advisable to remove both tubes except in young women who are of value to society and who may be able to have children. It has been our experience that the class of patients coming to our municipal hospital with tubal disease usually return or are treated elsewhere if some radical operation is not performed to remove both infected tubes. These individuals are usually a menace to society and a burden to the taxpayer, and the offspring of such moral degenerates are of little or no value to the community.

It is usually explained to the patients that if the second doubtful tube is left it may become necessary to remove such tube at some future time.

In removing the tube the writer carefully dissects the cornual portion from the uterine tissue, and a purse-string suture is used to close the horn of the uterus and prevent bleeding. This suture is either plain 1 or 0 double and the same suture is continued along the broad ligament in a running purse-string bringing it up to the horn of the uterus. The round ligaments, when relaxed, are stitched over this to give support and protection. The results are good and convalescence smooth in most of the cases when this procedure is followed.

All diseased ovarian tissue is removed. It is desirable to resect the ovaries should they be cystic and the ovarian ligaments shortened where there is much prolapse. Where adhesions are extensive and oozing surfaces remain, one or more Penrose drains are placed in the cul-de-sac.

I firmly believe that less trouble arises where this conservative method is followed, because, if there is any infection present, the retained exudate is a favorable culture medium in which micro-organisms can develop, and by forcing this infectious material between the coils of the intestines by intra-abdominal pressure, it thereby extends the area of infection and increases the possibility of adhesions.

When advisable, complicating or diseased tissue, such as the appendix, is usually operated upon first, and the major offending disease last, in order to lessen the possibility of spreading the infection.

Should an abscess be found in the abdomen when operating, drainage is imperative. The patient may then be placed over on the abdomen shortly after the operation. In this way perfect drainage is possible, the abscess cavity reduced in size, and the results more quickly attained. The drains are usually removed after the temperature is normal and the discharge has ceased.

If it were possible to see cases of Neisserian infection early, as more often happens in private practice, and before there is any invasion of the peritoneal cavity or involvement of the contiguous organs, a tube that is diseased could be radically removed, much additional suffering and complications would be prevented, and time and expense saved.

Some operators have followed this procedure in certain acute cases and have done conservative operations on the tubes by splitting them and emptying the purulent material, or by using drains from the end of the tubes.

In a recent case of a young woman in which the major symptoms were those of appendicitis, an operation was advised and performed. At the time of the operation a right tubal infection was evident with free pus in the cul-de-sac. The appendix was secondarily involved, but it was removed first, then the right tube from which pus was exuding. The left tube seemed to be in good condition and was allowed to remain. The round ligaments were shortened, and drainage was established. The pre-operative temperature was 103°, and now it fluctuates between normal and 101°. The pulse has dropped from 110 to 90, and the leucocyte count from 22,000 to 8,000. The abdomen is flat, and the patient is making a good recovery. She has no vomiting, nausea, or distention, and the bowels are normal. No doubt, this case would have gone on with a peritonitis with all the prolonged convalescent period, loss of time, and increased expense, but, as it is, she will be out of the hospital in much less time. There may be some chance of the second tube causing trouble, although it is not likely, as the pus will gradually become sterile and there will be less likelihood of prolapse of the tube and ovary or of adhesions resulting as the uterus will be in normal position.

This has been the outcome in a few similar cases. It is necessary to use good judgment in their selection, however.

It has been noted in some acutely infected cases, where the uterus was in the normal position and the patient placed in bed under rest treatment with face and knee-chest positions, that recovery was more apt to occur and surgical procedure to be unnecessary, but in other cases where the uterus was retrodisplaced, a massed condition of the adnexa and uterus ultimately occurred and few of the cases recovered, unless a surgical operation was performed early to replace the uterus. Late cases with displacements demanded a sacrifice of the tubes with replacement of the uterus. Herein lies an argument for the immediate hospitalization of acute gonorrheal cases. Especially would I advocate this for the worthwhile individuals belonging to the better class of society.

SUBSEQUENT TREATMENT

It is necessary carefully to supervise the postoperative treatment, preventing intra-abdominal tension by obviating gastro-intestinal distention. This may consist of gastric lavage and change of position occasionally to allow the contents of the bowel to travel, thus preventing the contents from being trapped in the coils of the intestines and lessening adhesions. Mineral oil is usually employed as soon after the operation as possible and colon flushings daily for a time.

Minneapolis General Hospital Statistics 1926

GONORRHEAL STATISTICS

Ovarian abscess	1
Tubo-ovarian abscess	2
Tubo-ovarian abscess, operative	9
Bartholinitis	2
Cervicitis	13
Endocervicitis	31
Oöphoritis	1
Oöphoritis, operative	2
Salpingitis, acute	4
Salpingitis, chronic	2
Salpingitis, chronic, operative	4
Salpingo-oöphoritis	22
Salpingo-oöphoritis, operative	6

NON-SPECIFIC

Hydrosalpinx	5
Oöphoritis, acute	3
Oöphoritis, chronic	14
Oöphoritis, chronic, operative	21
Pyosalpinx	3
Pyosalpinx, operative	9
Salpingitis, acute	21
Salpingitis, acute, operative	3
Salpingitis, subacute	3
Salpingitis, subacute, operative	2
Salpingitis, chronic	20
Salpingitis, chronic, operative	65
Salpingo-oöphoritis, acute	32
Salpingo-oöphoritis, subacute	6
Salpingo-oöphoritis, subacute, operative	1
Salpingo-oöphoritis, chronic	23
Salpingo-oöphoritis, chronic operative	25
Total number of operative cases for 1926	319
Laparotomies	178

With 3 deaths, or .017 per cent.

Many of the non-specific salpingitis cases gave a venereal history, but no G.C. were found microscopically.

Average Leucocyte Count And Stay In Hospital In Infected Cases

Minneapolis General Hospital, 1926

Pre-operative stay in hospital	Post-operative stay in hospital	Av. w. c. before operation	Av. w. c. at operation	Av. w. c. after operation
15.5	14.3	18,548	9,310	12,249

Statistics Of Operative Procedures in Gynecological Cases

1923-1927 4½ year period at Minneapolis General Hospital

	No.
Total Gynecological Operative Procedures	1,092
Incision And Drainage Of Pelvic Abcesses	16
Oöphorectomies—Necessary and usually single	75
Salpingectomies— Usually double	370
Salpingectomies—Tubercular	2
Other Operations Not Infections	633

CASE REPORTS

D. C. Age 22. Divorced.

Past history:

Childhood diseases. 4 pregnancies—last miscarriage.

Chief complaints:

Pain in the lower abdomen, nausea, vomiting 4 days. Vaginal discharge.

Physical findings:

Prolapsed uterus, corpus somewhat fixed, mass in cul-de-sac. Adherent fluctuating mass both sides of pelvis.

Pre.-op. tr.

Rest, ice cap to abdomen, elevate head of bed, fluids.

Pre-op. diag:

Bilateral salpingo-oöphoritis.

Op. findings:

Adhesions. Masses in pelvis, involving tubes and ovaries.

Operation:

6-15-27. Appendectomy, bilateral salpingectomy, right oöphorectomy.

Path. findings:

Tube with extensive chronic suppuration with scarring of adventitia. Appendix—perivascular, foci of lymphocytes in serosa.

Pulse: 60 to 140.

Temperature:
97.2° to 101°.

Laboratory:
R. B. C., 4,760,000. 4,500,000. Wassermann, positive. W. B. C., 20,000. 18,800. 10,500. 12,850. 12,850. 9,650. 8,450. P. M. N., 93, 88, 81, 79, 75, 69.

P. O. course:
In hospital twenty-nine days before operation.
In hospital seventeen days after operation.

Final diagnosis:
Chronic bilateral salpingitis.
Cyst of right ovary.
Syphilis, tertiary.
Chronic appendicitis.

Condition at discharge:
Improved.

L. M. Age 20. Married.

Past history: Gonorrhea since 1926.

Chief complaints:
Abdominal pain. Discharge several months. Hemorrhage one week.

Physical findings:
Profuse discharge. Cervix multiparous, uterus tender. Both adnexa contain large masses that drop into cul-de-sac. soft non-fluctuating, moderately tender, fixed.

Temperature: 100.8° to 97°.

Pulse: 76 to 132.

Laboratory:
Urine, 100 to 200; pus cells.
R. B. C., 3,960,000. P. M. N., 72, 82, 85.
W. B. C., 12,200. 12,650, 19,050, 18,700, 14,900, 13,150. Smears negative.

Pre.-op. tr.
Rest, douches, fluids, ice bag to abdomen, elevate head of bed.

Pre-op. diag:
Chronic bilateral salpingo-oöphoritis. Bilateral adnexal inflammatory masses, pyosalpinx and cystic ovary. Cystitis.

Operative findings:
Adhesions, salpingitis, cystic ovaries.

Operation:
6-25-27. Bilateral salpingectomy. Left oöphorectomy. Ligaments of uterus shortened by stitching over horn.

P.-o. course:
In hospital ten days before operation.
In hospital fifteen days after operation.

Path. findings:
Ovary and tube adherent. Tube shows chronic suppuration with considerable scarring.

Final diagnosis:
Chronic bilateral salpingitis.
Pyosalpinx.
Cyst of both ovaries.

Condition on discharge:
Recovered.

J. H. Age 22. Single.

Past history: Twins in 1925.

Chief complaints:
Abdominal pain with nausea and vomiting two days.

Physical findings:
Profuse discharge, corpus firm and fixed. Left adnexa enlarged, fixed. Mass on right tubo-ovarian 1½-2″ fixed semifluctuating. Mass probably causing obstruction of ureter on right.

Temperature: 97° to 101.2°.

Pulse: 50 to 112.

Laboratory:
100-125 pus cells in urine. R. B. C., 4,170,000. 4,180,000. Leu. 17,850, 10,100. 19,900. P. M. N. 72, 65, 82.

Pre.-op. tr.
Rest, elevate head of bed, fluids, douches, ice to abdomen.

Pre.-op. diagnosis:
Right pelvic tumor, inflammatory mass or dermoid. Pyelitis.

Oper. findings:
Numerous adhesions between small intestines. Left tube was irregular, tortuous and enlarged. Chronic appendicitis.

Operation:
6-11-27. Appendectomy, bilateral salpingectomy, liberation of bowel.

P-o. course:
In hospital ten days before operation.
In hospital fourteen days after operation.

Path. findings:
Tubes tortuous, surfaces roughened and hemorrhagic. Lumina partially sealed. Both tubes show chronic suppurative inflammatory process.

Final diagnosis:
Chronic appendicitis. Chronic bilateral salpingitis. Acute right oöphoritis. Pelvic adhesions.

Condition on discharge:
Recovered.

F. S. Age 22. Married.

Past history: Appendectomy. Two pregnancies, one miscarriage.

Chief complaints:
Pain in lower abdomen 2 weeks. Discharge.

Findings:
Right adnexa, slight solid mass. Left semi-fluctuating mass. Tenderness over lower abdomen. Profuse vaginal discharge. Corpus normal.

Temperature: 97.8° to 101.5°.

Pulse: 60 to 110.

Laboratory: R. B. C., 4,490,000. P. M. N., 75, 22, 59, 68. Leucocyte 8,400; 14,500; 9,300; 20,800. 6,050.

Pre.-op. tr.
Rest, douches, ice to abdomen, sedatives.

Pre-op. diagnosis:
Subacute bilateral salpingitis.

Operative findings:
Adhesions of ovaries and tubes. Salpingitis.

Operation:
6-20-27. Bilateral salpingectomy. Single oöphorectomy. Suspension of uterus.

P.-o. course:
In hospital seventeen days before operation.
In hospital fourteen days after operation.

Path. findings:
Tubes tortuous, surfaces roughened and reddened, one is closely adherent to cystic ovary. Chronic suppurative inflammatory disease.

Final diagnosis:
Chronic bilateral salpingitis.
Cyst of left ovary.
Second degree retroversion of uterus.

Condition on discharge:
Recovered.

Mrs. M. W. Age 36. 3 children.

Past history:
Married and divorced 4 yrs. ago. Abortion 6 mo. ago.

Chief complaints:
Abdominal pain and vomiting 1 week. Backache. Irregular menses and vaginal discharge 6 mo.

Physical findings:
Abdomen markedly distended with generalized tenderness and muscular rigidity of lower abdomen. Muco-purulent vaginal discharge.

Indurated mass in cul-de-sac extending up to umbilicus, movement of corpus difficult. Adnexa not palpable.

Temperature: 98.6° to 97°.

Pulse: 98 to 144.

Laboratory: Leucocyte, 26,600. P. M. N., 76. R. B. C., 2,810,000. Hgb., 58.

Pre.-op. tr.
Rest, iron.

Pre.-op. diagnosis:
Septic abortion, threatened or incomplete.
Septic endometritis and metritis.
Acute general peritonitis.
Acute intestinal obstruction.

Operative findings:
Ectopic pregnancy, ruptured. Small amount of blood in abdomen. Evidence of peritonitis and gas with foul odor.

Operation:
12-11-26. Removal of fetus and placenta.

P.-o. course and complications:
Patient died directly following operation.

Path. findings:
Eviscerated fetus 4-5 mo. with placenta.

Final diagnosis:
Generalized peritonitis.
Extra-uterine pregnancy, ruptured.
Obstruction intestinal.

Miss L. O. Age 21. Single.

Past history:
History of induced abortion.

Chief complaints:
Vomiting two days. Severe abdominal pain.

Physical findings:
Bloody discharge. Corpus slightly enlarged and boggy. Adnexal regions tender. Breasts expressed of milky secretion.

Temperature:
97.6° to 105.6°.

Pulse: 84 to 156.

Laboratory:
Leucocyte 13,300, 12,500, 9,200, 9,700. P. M. N., 81, 84, 95, 91. R. B. C., 4,260,000. 3,800,000. Hgb., 85, 80.

Pre.-op. tr.
Rest, forced fluids, ice bag, sedatives. Elevate head of bed. With a history of induced abortion, patient was transferred from surgical to gyn. dept. With symptoms of incomplete abortion rest treatment was given and later d. and c. performed—very few shreds removed.

Pre.-op. diag:
Appendicitis, but with history of induced abortion that diagnosis was considered most likely with peritonitis. Septic abortion.

Operative findings:
Small amount of curettings obtained.

Operation:
9-14-26. D. and c.

Path. findings:

Endometrium normal as to distribution and number of glands and amount of stroma, no evidence of pregnancy present.

P.-o. course and complications:

Nausea, greenish emesis, hiccoughing, pulse weak, death two days later.

Final diagnosis:

Septicemia generalized. Peritonitis generalized.

Appendicitis, acute with perforation.

Autopsy findings:

Gangrenous appendicitis and localized appendiceal abscess.

Acute suppurative peritonitis. Septic portal thrombosis.

Abscesses of liver and mesentery.

Cloudy swelling of heart, kidneys and spleen.

Acute septic splenitis.

L. R. Age 20. Single.

Past history:

Menstrual history—some dysmenorrhea.

Chief complaints:

Pain in right lower abdomen.

Physical findings:

Retrodisplaced uterus. Mass in left pelvis, fixed, high up. Right ovary enlarged.

Temperature:

97.6° to 102.2°.

Pulse: 68 to 140.

Laboratory:

R. B. C., 4,000,000. P. M. N., 75. W. B. C., 16,550, 22,200, 20,500, 17,050, 33,200, 13,400, 23,500, 14,950, 13,350, 14,350, 16,250, 13,450.

Vaginal smears negative.

Pre.-op. tr.

Rest, ice bag to abdomen, fluids, sedatives, elevated head of bed.

Pre-op. diag:

Bilateral salpingitis. Retroflexed uterus.

Operative findings:

Adhesions, small adherent mass on each side of uterus due to thickened tubes and secondarily infected and cystic ovaries.

Operation:

8-8-27. Appendectomy, bilateral salpingectomy.

Path. findings:

Lumina show diffuse exudate. Slight perivascular exudation in adventitia. Very little proliferation. Appendix—serosal perivascular lymph exudate.

P.-o. course:

In hospital nine days before operation.

In hospital eighteen days after operation.

Final diagnosis:

Salpingitis—chronic bilateral.

Chronic oöphoritis.

Chronic appendicitis.

Condition on discharge:

Good.

CONCLUSIONS

1. Infection in the female pelvis constitutes a large percentage of the gynecological practice of to-day.

2. From statistics gathered, about 80 per cent of the cases appear to be of Neisserian origin. Such cases are a menace to the public and a burden to the taxpayer.

3. Acute Neisserian infection cases should be hospitalized as soon as possible:

a. To protect society.

b. To institute at once a plan of treatment suitable to the case.

4. Early acute gonorrheal cases with normally placed pelvic organs may recover by judicious rest treatment.

5. A few special acute gonorrheal cases perhaps could be operated on early to restore the pelvic organs to the normal circulatory level and position and, thereby, conserve the tubes, or in others to remove the tubes and thus avoid prolonged and expensive treatment.

6. On the whole, a greater percentage of recoveries apparently follow conservative treatment as the cases are, as a rule, seen late by the surgeon.

7. Patients usually return if not operated on because of secondary infection or have continued ill health, especially where there is much displacement.

8. Radical operation is indicated in most of the chronic cases.

9. Careful and thorough surgical technic avoids the return of these patients for more operative treatment.

10. A resting case of doubtful diagnosis, with increasing severe symptoms, or with blood findings indicative of spreading infection, may demand immediate operation.

11. Streptococcic or staphylococcic infection may gradually subside under careful management.

12. Cases with Neisserian infection are usually in a class where the surgeon could justly disregard the possibilities of sterility following an operation.

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NON-MALIGNANT TUMORS OF THE RECTUM AND ANUS*

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In considering tumors of the rectum and anus one is likely to think only of the malignant group; that is, tumors which by direct invasion or metastases cause the death of the individual. As a matter of fact there are a far larger variety and a greater number numerically of non-malignant tumors than those of the malignant variety. Their importance should not be underestimated Without being malignant they may necessitate a serious operation or even produce death. A good example of this is the case of multiple polyposis where colectomy is the only procedure offering a radical cure. If not operated on, hemorrhage, intercurrent infection, or malignant degeneration usually produces death. The question of malignancy should always be considered in the case of non-malignant tumors, for many of them do become malignant. For this reason, if for no other, it is important that they be recognized early, and properly cared for while operative procedure is relatively simple and results certain.

Numerically by far the greater number of non-malignant tumors are epithelial in origin, but there is also a wide variety of the more rare types which are not epithelial in character. Since the epithelial group is the largest it might be well to consider it first. The size of these tumors varies greatly as do tumors elsewhere in the body. The first consideration is the blood supply. If this be generous the tumor increases rapidly in size and is limited in growth only by factors outside the tumor itself. A number of conditions tend to limit the size of non-invading tumors of the rectum. The first consideration is that the majority of them tend to form pedicles. As the pedicle elongates and becomes fibrous the blood supply of the tumor is lessened. This lack of nourishment retards the growth of the tumor and in many cases actually causes it to shrink or even slough. Due to pressure of the rectal walls, trauma of the passing stools, and imperfect blood supply, superficial ulceration is common. The resulting scar formation again produces shrinkage of the tumor. It is these factors which cause so many rectal tumors to assume a hard fibrous appearance regardless of the source of origin. These secondary changes no doubt play a part in the lack of agreement prevalent among pathologists and proctologists as to the origin and proper terminology in the case of these growths. If we consider the history of the growths in their early stages before secondary changes have occurred the problem is much more simple, and there is no reason for the multiplicity of terms which have developed. It is well to remember that the term polyp has no connection with the histological type of tumor but simply means any tumor with a stalk or pedicle.

There is considerable difference of opinion as to the type of pedunculated epithelial tumors of the rectum. The most common classification is to divide them into polyps, adenomas, and villous tumors. Fundamentally it does not seem to me that there is any real difference, as far as origin is concerned, of the tumors designated as adenomas and polyps. In other words, they are one. If the tumor has a thin pedicle of some length and a raspberry-like tumor on the end of a stalk it is termed a polyp. If it has a large, thick, short base with the raspberry-like tumor it is termed an *adenoma*. As far as I can see they are the same histologically the only difference being in the richness of the blood supply. The so-called adenomatous type is more likely to become malignant, but this is not due to fundamental histological difference but is probably due to greater nourishment and the ease with which the epithelial layer can grow down into the broad base. Another type termed the polyp is the tumor which has a long narrow pedicle with a hard fibrous tumor mass on the end. This type of tumor is simply the end result of one previously described—that is, one on which lack of blood supply and infection have produced fibrosis. In some cases of multiple polyposis every stage and gradation of these conditions may be seen in a single patient. In general it may be said that any tumor of this type with a long narrow pedicle is unlikely to become malignant and those which are hard and fibrous will never do so. On the other hand those with a large short base frequently undergo malignant change. Occasionally internal hemorrhoids become inflamed and later fibrose. A pedicle may form, and they appear as a polypoid tumor. In certain cases of ulceration of the colon and rectum the mucosa about the margin of an undermining ulcer may become edematous and protrude in a polypoid fashion into the lumen of the bowel. This condition, however, should not be confused with true polyposis, for, as inflammation subsides and healing occurs, the polypoid appearance disappears.

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The other form of epithelial tumor is the so-called *villous tumor*. There is a difference of opinion as to the exact classification of this tumor. It is probably simplest and most accurate to say that it is a special form of adenoma. The tumors consist of a central stalk or attachment of blood vessels and connective tissue. From this stalk are many branches and sub-branches which give a beautiful arborescent picture. These branches are covered by columnar epithelium, which secretes a viscid mucus, giving the tumor a soft gelatinous appearance much like the hydatid form of mole. This mucoid material makes the tumor appear as a solid mass, but on placing it in water the branches separate out. The arrangement of the epithelium is that of any other papilloma, but there seems to be an especial tendency to invade and develop into a malignant tumor. These growths are often quite large, and while in some cases they become malignant, they may remain benign for a long time. I removed a growth of this kind in 1919, and there has been no recurrence. This tumor had been present for at least eight years, for the patient had partially extruded it with bowel movement during that time. This tumor had an attachment about 1 cm. thick at its base and was attached along the wall of the rectum approximately 15 cm. The branches began to grow out from the pedicle about one inch from the point where it was attached to the rectal wall. The tumor weighed 570 grams.

Epithelial growths outside the anus appear as squamous celled papilloma. These are more commonly termed venereal warts or condylomata acumunita. They are grayish or pinkish white in appearance and are definitely branched. They vary from a few small warts to a mass covering several square inches of skin to a depth of over an inch. They produce an acrid, foul-smelling discharge which is very irritating. Removal with cauterization of the base is the best method of curing them.

The remainder of the growths seen about the rectum are due to embryological defects or changes in tissues other than the epithelial type. Of the connective type of tissue growths dermoids and teratomas are the most frequent types. They are embryological in character and are most often located between the coccyx and the rectum. These growths vary in size, usually being not larger than a duck egg, although there is one case on record of a dermoid in this region weighing fourteen pounds. Dermoids of the colon are rare, but there is one case on record which protruded into the sigmoid and was attached to the wall of the gut by a definite pedicle. Some of these cysts contain cells similar to glioma cells and are lined by ciliated epithelium. This group probably originates as a rest from the neural tissue of the embryo.

Lipomas usually appear as growths protruding into the lumen of the bowel or adjacent to it in the ischiorectal fossa. They originate outside the bowel wall but may protrude into the rectum in a pedunculated fashion. Since their origin is outside the gut a peritoneal prolongation may be in the pedicle. This should be kept in mind in removing them.

Fibroma.—In the rectum fibroma usually occur as polypi with a distinct pedicle. They are probably due to degenerative changes in papillomas or adenomas or to fibrosis in inflamed hemorrhoids. They may occur in the deeper structures adjacent to the anus. I had one case in which the mass lay just posterior to the anal canal. It did not bulge externally, but was easily palpated. The growth was 2x3 cm. in size. It seemed adherent to the anococcygeal ligament.

Myoma.—These tumors arise from the coat of the bowel and are similar to those found in the uterus. Myomas grow very slowly and as they increase in size protrude into the lumen of the bowel and may, or may not, become pedunculated. The size varies from that of a hazel nut to a mass weighing as much as twelve pounds. Their consistency depends upon the amount of fibrous tissue they contain. The mucous membrane over them is usually not ulcerated. They occur in adult life. In twenty cases reported at the Mayo Clinic the ages varied from twenty-one to eighty-five years. Malignant change is rare, but a few cases have been reported. Gummas sometimes simulate these growths. The method of removal varies with the case. Either through the rectum, by excision externally to the rectum, or abdominally. Mummery reports one case where he was compelled to remove the entire rectum.

Chordoma.—Tumors arising from the notochord occasionally occur. These appear usually as a small nodule lying between the coccyx and the rectum. In some cases they become malignant. Once malignancy has developed, the tumor metastasizes early through the lymphatics. These patients usually die of metastasis, though the growth has been removed locally. The time of recurrence after the primary removal is usually several years. One tumor of this type is recorded as weighing thirteen pounds. The only other neural tumor associated with the rectum is an anterior sacral meningocele. In this condition the meningocele may protrude into the lumen of the rectum as a polyp. Kennedy, of the Mayo Clinic, reports such a case in 1926. The condition was thought to be an ordinary polypoid growth. In removing the mass the spinal fluid was seen to drain from the operative wound. Meningitis developed, and death occurred.

Endometioma.—This tumor appears in the rectovaginal septum or in Douglas' cul-de-sac. It is formed from the endometual cells of the uterus. Because of the nature of the tissue in the growth it is not infrequently diagnosed as a malignant tumor by pathologists.

New growths from parasites.—These are rare. I was able to find one case of a tumor produced by oxyuris vermicularis. The most frequent is an adenomatous growth produced by the schistosoma hematobium. This condition is fairly common in Africa, especially Egypt. One case was reported from Porto Rico in 1926.

Angiomas are rare. They may occur either in the rectal or anal wall or adjacent to the anus. They have the appearance of a nevus elsewhere in the body. In the rectal cases they are differentiated from hemorrhoids by the fact that they are situated on the rectal wall higher than the hemorrhoidal plexus. They frequently give rise to serious hemorrhage. If the angioma is large local operative procedure is dangerous because of difficulty in controlling hemorrhage. Colostomy with excision of the rectum may be indicated. I have not met with a case of this kind, but treatment by the injection of boiling water or quinine urea hydrochloride, as is sometimes done with other nevi, might be considered.

Inflammatory tumors are most frequently due to syphilis. Gummas of the rectum occur as hard ovoid swellings under the rectal mucosa. They are usually multiple and vary in size from 1 cm. to 3 cm. They often break down, forming a hard crater-like ulcer. In this stage they may be confused with carcinoma. However, a Wassermann with proper antiluetic treatment soon clears up the diagnosis. If there is still room for doubt a section of the tissue will clear up the diagnosis.

Occasionally a low grade infection extending from the rectum may fill the ischiorectal fossa with a hard non-tender mass. I saw one case which gave a history of a hard lump developing in the ischiorectal fossa. It had been noticed for three months gradually increasing in size. Bowel movements were painful due to the pressure of the mass on the rectum and anal canal. The mass was hard to touch and cut and appeared very much like a fibrous tumor. Section showed only inflammatory tissue and the remainder of the tumor disappeared under hot applications after which an opening into the bowel was demonstrated.

I realize that a complete discussion of this subject is impossible in a short paper of this kind., However, if it has again called your attention to the fact that there is a wide range of pathological conditions occuring in and about the rectum it has served its purpose.

THE SPIRIT OF HIPPOCRATES*

By Arnold S. Anderson, M.D.

WABASHA, MINNESOTA

Let me first voice my sincere thanks for the privilege of meeting with you this evening. When I was asked by Dr. Myers to partake in one of the Lymanhurst Staff programs I was also informed that I could choose my own subject, a privilege which I prized very highly yet which also carried with it the probability that what might be of interest to me may reasonably be boresome to you.

It so happened that while these transactions, so to speak, were in the making I was engrossed in the reading of Garrison's "History of Medicine," and when I came upon the Grecian period in the history of this art with its great Hippocrates and his memorable document it occurred to me that it would be interesting even if not instructive to view some of our most beloved physicians in the light of this oath and see how well they reflected it. I had recently read Cushing's "Life of Sir William Osler," Wilson's "Biography of Sir James Mackenzie," and Trudeau's "Autobiography," and so I picked upon these great physicians, beloved beyond a doubt by their medical brethren, for a consideration of some of the qualities that made them beloved and worthy followers of Hippocrates.

The hope that such a subject might be of interest to others than myself was encouraged by a passage from Marcus Aurelius in his "Golden Meditations": "When thou wishest to delight thyself think of the virtues of those who live with thee, for instance the activity of one, the modesty of another, and the liberality of a third, and some other good quality of a fourth, for nothing delights as much as the examples of the virtues when they are exhibited in the morals of those who live with us and present themselves in abundance as far as is possible." These words from this philosopher-ruler did lend encouragement to the preparation of the present paper.

It is a far cry from Hippocrates to Osler, along an interval characterized by the advent and development of many wonderful scientific achievements which have served to change materially the calling of medicine. It has been raised from an affair of charms and spells of ancient days to the present-day dignity of an honored profession. "The history of the advancement of medical science," says Garrison, "is the history of the discovery of a number of important fundamental principles leading to new views of disease, to the invention of new instruments, procedures, and devices, and to the formulation of public-hygienic laws all converging to the great ideal of preventive or social medicine, and this was accomplished by the arduous labor of a few devoted workers in science." The fact from history is apparent that medicine has progressed from a place of mysticism and superstition to an art and science characterized by nobility, dependability, accuracy, and results. It has been freed from the fetters of theological strings of ancient days and placed on a pedestal of honor and respect.

It is interesting to note, however, that in spite of the tremendous advances made in the field of medical science there are still certain virtues in its art that have remained unchanged from the time of Hippocrates, and earlier, up until the present time. As Garrison states, "The civilized mind differs from the savage mind only in respect of a higher evolutionary development. Human races and radical customs have changed as they become more highly specialized. The heart of man remains the same." Man, therefore, is still found to be governed by the same emotions. He still hungers for the same love, still fears the loss of honor, and so still requires the same tactful handling and understanding. As of the days of ancient medicine, so to-day success in medicine is dependent to a great extent on the factor of personality. Our method of approaching individuals and their problems and the comfort and hope which we are able to give to them—this art still holds a highly important place in the practice of medicine. It is said that in treating the different neuroses, Charcot was guided almost entirely by his favorite maxim from Coleridge: "The best inspirer of hope is the best physician." The old proverb, that "He who wishes to rule the world must know the world," can aptly be applied to medicine as "He who wishes success in medicine must know medicine, its art as well as its science." But the science of medicine has grown by leaps and bounds while its human touch has remained much as before, that is we cannot now use the science of the Hippocratic period, yet the ideals as voiced by Hippocrates in his oath still challenge our highest aspirations, the virtues which he advocated are still to be used as of old. "To carry out that regimen which according to my power and discernment shall be for the benefit of the sick and will keep them from harm and wrong. To none will I give a deadly drug, even if solicited, nor offer counsel to such an end. Likewise to no women will I give a destructive suppository, but guiltless and hallowed will I keep mine life and mine art. I will cut no one whatever for the stone, giving way to those who work at this practice. Into whatsoever houses I shall go I will go for the benefit of the sick, abstaining from all voluntary wrong and corruption and from lasciviousness with women or men, free or slaves. I will keep silence regarding that which within or without my practice I shall see or hear in the lives of men which should not be made public, holding such things unfit to be spoken. And now, if I fulfill this oath and break it not, may the fruits of life and art be mine, may I be honored of all men for all time, the opposite if I shall trangress and be foresworn." This oath, written by Hippocrates over 400 years B. C., still serves as our ethical guide-post, for the heart of man has remained the same.

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*Presented by invitation before the Lymanhurst Medical Staff, January 31, 1928.

In reading the life of Edward Livingston Trudeau we are impressed with a number of virtuous qualities. We see him as he is taken to Saranac Lake, a victim of tuberculosis, confirmed in his belief that here, after all, is a real place to die if so it must be. He faces it with a courage befitting a Spartan, a fortitude which in later years went to the making and popularizing of the sanatorium idea in the United States. As rest brought new strength to him with abatement of his disease symptoms we find him responding to sick calls from his ill neighbors, traveling through miles of cold and snow in order to alleviate the suffering of some sick friend or stranger. Ere long he applies himself to the sanatorium idea and after many months of patient working and waiting in the face of many reverses, we find his efforts crowned with success, together with a widespread appreciation of his goodness, his sympathy, his sincerity, and his kindness. Trudeau's influence traveled far and wide, always reflecting itself in a creditable way to the oath of Hippocrates. He accomplished a wonderful work in spite of the fact that he carried constantly with him an infirmity which in later years mobilized itself to crush him. Trudeau exemplified the words of Marcus Aurelius, "Remember that on every occasion that leads thee to vexation to apply this principle, not that this is a misfortune, but that to bear it nobly is good fortune."

In a study of the life of Sir James Mackenzie we are struck by his own apparent lack of appreciation of his true worth. His life is characterized by the ever present quality of humility, be it as the general practitioner or as the renowned heart specialist. A description of the man can best be seen by quoting his biographer Wilson: "Mackenzie was a splendid looking man, tall, broad-shouldered, with massive brows and the clear masterful features of physical and mental strength. Courage radiated from his eyes, and not courage only but humor and kindness also and a native gentleness of disposition which was in keeping with his robust vigour. This man was incapable of being small even to the extent of being petulant, but he was exquisitely simple, as simple as a child."

Mackenzie graduated from the University of Edinburgh in 1878. Following his graduation he took a locum tenency for a period of four months, after which he served as house physician at the Edinburgh Royal Infirmary for a few months. He left that position to come to the town of Burnley, in Lancashire, to act as assistant in the firm of Dr. Wm. Briggs and Dr. John Brown. Here he remained as a general practitioner until he was fifty-four years of age. It was here with his "wait and see method" that he gathered sufficient cardiac data with which to open the eyes of the University giants to a new view of heart disease. His stay at Burnley won for him the title of "The Beloved Physician," and fortunate indeed was Burnley for having as its family doctor such a kind and understanding physician. His work gained wide recognition and medical men from far distant cities flocked to Burnley for the new knowledge it possessed. At the age of fifty-four he left his country practice and moved to London, his purpose being to acquaint the University professors with his new cardiac facts. His reception was at first distinctly cool, and his pioneering along this line was not without considerable discouragement. It was hardly understandable to the University professors how a country practitioner could have anything of value to contribute to scientific circles. The final result, however, was soon seen to be a hearty recognition of the unquestionable contribution that Mackenzie had made to the field of medicine. He flourished in London as a heart specialist for a period of about eleven years, during which time he gained for himself a host of friends and admirers. At sixty-five years of age he left an 8,000-pound-a-year practice in order to again become a general practitioner. His purpose this time was to seek to determine "the earliest symptoms of disease," and this he felt could best be obtained in the rôle of general practitioner. To this end he pledged his last few years, and on January 26, 1925, he passed to his rest.

Sir Wm. Osler was born July 12, 1849, at Bond Head,Tecumseth County, near the edge of the wilderness in what was upper Canada. His early life was characterized by a persistency of purpose, an earnestness and sincerity in his efforts, a love of knowledge, and an outstanding ability to assimilate facts; yet through it all there pervaded a spirit of buoyancy and joviality which always made him a delightful and choice companion. These enviable qualities remained with Osler throughout his lifetime even to his death bed, at which time one is firmly impressed with his marvelous and comforting philosophy of life. He was jovial to the last.

It is with a feeling akin to reverence that we note the inspiring and wholesome Osler influence which pervaded the various medical centers with which Osler was affiliated. McGill, Philadelphia, Baltimore, and lastly Oxford all tasted the stimulating presence of this great man, and each place was a better place for him having served it.

It was a sad and solemn occasion throughout the medical world, as well as at Oxford, when, on the the afternoon of December 29, 1919, this lovable physician took to his last rest.

It is not a difficult task to harmonize these three great figures with the oath of Hippocrates, for the very virtues which they possessed and exhibited are the same virtues in which the Oath instructs us. Faithfulness, sincerity, and a tender solicitude for the sick; respect, reverence, devotion, and enthusiasm for the art which they practiced; and with these qualities a beautiful attitude of humility toward the vast greatness of it all. They realized that life and things in life are changeable, and that one must be humble and inquiring and patient in order to hope to solve the problems that present themselves, and so help to add to the sum total of human knowledge. How necessary, after all, is this spirit of humility, not only for obtaining success, but also for retaining it. A quality which makes the holder, not only a more careful searcher, and a more tolerant one, but also a more beloved one.

These three physicians were, indeed, searchers for the truth and fighters for its propagation. They were true disciples of Socrates in that they pursued knowledge rather than proclaimed it.

BOOK NOTICES

MINOR SURGERY. By Arthur E. Hertzler, M.D., F. A.C.S., Chief Surgeon, and Victor E. Chesky, A.B., M.D., F.A.C.S., Chief Resident Surgeon, Halstead Hospital, Halstead, Kas., 438 illustrations. 568 pp. Price $10.00. St. Louis: C. V. Mosby Co., 1927.

This book on minor surgery by Hertzler and Chesky is primarily written as a handbook for the student and general practitioner.

It answers this exceedingly well as it emphasizes principles of surgery and covers the entire field of minor surgery, with very little reference made to pathology and technic. As an aid to the student in the dispensary and to the man in general practice, it is without doubt the most complete and thorough text on minor surgery which we have in literature to-day.

—E. A. REGNIER, M.D.

GONOCOCCAL INFECTION IN THE MALE. By Abr. L. Wolbarst, M.D., Urologist and Director of Urologic Clinics, Beth Israel Hospital; Consulting Urologist, Central Islip State Hospital, Manhattan State Hospital, and Jewish Memorial Hospital, Etc. With a Chapter written by J. E. R. McDonagh, F.R.C.S., Surgeon, London Lock Hospital, Late Hunterian Professor, Royal College of Surgeons, Etc., London England. With eighty-nine Illustrations, including seven color plates. The C. V. Mosby Co., St. Louis, 1927. Price $5.50.

This treatise on "Gonorrheal Infection in the Male" is an exceedingly comprehensive and detailed treatment of the subject, produced by the author after years of experience and collaboration.

The different infections in the various regions with their treatment are taken up in detail and according to the best treatment of to-day. His chapters particularly on the treatment of acute gonorrhea and chronic gonorrhea, are exceedingly well done.

The last chapter, headed "Views on Gonorrhea," by Mr. J. E. R. McDonagh, perhaps while not fully agreeing with universal American views, undoubtedly has much food for thought and meditation.

This book can be recommended to students and practicing physicians as a reference and a guide to treatment.

—JOHN L. EVERLOF, M.D.

BABY'S HEALTH DAY BY DAY. The Professional Press, Inc., 17 No. Wabash Ave., Chicago, Ill.

This book provides an outline for a complete and very detailed record of the progress and development of the baby from day to day and week to week. There are also sections on "Infant Hygiene," "Infant First Aid," and "Recipes for Infant Foods."

It is well bound and attractive, but too detailed for the busy mother.

—R. L. WILDER, M.D.

THE
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THE AMERICAN MEDICAL ASSOCIATION

The American Medical Association meeting, which was held in Minneapolis, as is quite well known, was from all accounts that we hear from Delegates and officials a very successful one. Of course the new Auditorium, which the Association occupied, added a great deal to the success of the meeting. It offered plenty of space for exhibits and for meeting places, and was evidently a satisfying curiosity to many of the members.

The meeting of the Surgical Section in the Lyceum Theater, with two or three other Sections, and the meetings held in the Loring Theater and the Marigold Ballroom were all successful.

The rush of registration was unusual, for on Monday morning the registration was very large, and the total registration up to Friday noon, when the Association meeting adjourned, was 5,036. From all one could see there was apparently no confusion and no crowding or discomfort. Although it was often predicted that Minneapolis would be unable to take care of the hotel reservations, it was amply able to do so, and so far as we know no one suffered discomfort. There were various rumors in the air that there would be discomfort, but evidently the men were good sports, and if they were uncomfortable they said nothing about it but went on about their job of attending the meeting, and so on.

Of course, much of the success of the meeting was due to the presence of Dr. Olin West, the Secretary and General Manager of the American Medical Association, and his associates, Dr. P. N. Leach, director of the scientific exhibits, and Mr. Will C. Braun, the business manager. The way these three men turned the Auditorium into a wonderful show place was a delight to behold. All the details were skillfully and carefully arranged, and the open meeting on the night of Tuesday, June twelfth, was well attended. The estimate made by Dr. Leach as to the probable attendance proved to be correct; he knew about how many would be there, and said that ordinarily the opening meeting was not attended by all of the members. During the open meeting, which means the interchange of presidents, Dr. Jabez N. Jackson, of Kansas City, retired, and Dr. William S. Thayer, of Baltimore, assumed the presidency, and both men made appropriate addresses.

The president of the Minnesota State Medical Association, Dr. C. B. Wright, addressed the Assembly as did the president of the Hennepin County Medical Society, Dr. A. E. Hedback. We were particularly fortunate in having Governor Theodore Christianson speak at the open meeting and also at the dinner given to the House of Delegates. Governor Christianson proved, what he has always shown, his warm friendliness to the medical profession, and he was very happy in his remarks and very complimentary to the profession in both of his talks.

The chairman of the local committee of arrangements was privileged to make the announcements, which were very brief as they consisted of only two or three announcements: that on Wednesday evening the Minnesota Alumni would give a dinner at the Nicollet Hotel; this dinner was under the direction of Dr. N. O. Pearce and Dr. O. S. Wyatt, who had worked tremendously hard in arranging for the entertainment of the alumni, but were very much surprised to find there were 750 present at the dinner—more than they had expected. It went off with a rush, and it was delightful to see the various classes of medical men gathering under their pennants. Following the dinner the Alumni Association of Minnesota gave a vaudeville entertainment which lasted until 2:00 A. M. and was a highly enjoyable affair, as those who were there will testify. This entertainment was under the management of Dr. F. A. Erb.

The second announcement was to the effect that on Thursday evening a reception would be given to the presidents of the A. M. A. at the Marigold Ballroom, and this, if the writer does say it, was a gorgeous affair, the ballroom being particularly well adapted to a large reception; and it seemed to the editor, as he stood in line welcoming the visitors as they came along, that there must have been a couple of million present, but as a matter of fact there were about three thousand. Fortunately, the Marigold Ballroom had a fountain service which apparently was liberally patronized. A checking service was also made available for the men and women without charge, as was the fountain service.

The announcements for the women were made at the same time, and there happened to be 1,240 registered—a much larger registration than was expected. On the first day the women were entertained at the Minneapolis Institute of Arts at a tea, the members of the Women's Auxiliary of Hennepin County acting as hostesses.

On the evening the House of Delegates were given a complimentary dinner by the Minnesota State Medical Association, a dinner was given to the wives of the officers of the State Medical Association and the wives of the House of Delegates of the State and the American Medical Associations by the State Auxiliary Association.

On Tuesday the national board meeting of the A. M. A. Auxiliary was held, at which there were eighty present. A complimentary luncheon was given by Mrs. J. O. McReynolds, of Dallas, Texas, the retiring president of the National Auxiliary, at the Woman's Club. On Tuesday afternoon the Ramsey County Auxiliary entertained the visitors with a drive about St. Paul and a tea and reception at the University Club in St. Paul.

On Wednesday, June thirteenth, the National Auxiliary meeting was held at the Automobile Country Club, about fourteen miles out, with Mrs. McReynolds presiding. Busses and automobiles were furnished, and luncheon was served to more than five hundred women at that time. In the evening each woman who chose to go was given a ticket to the Shubert Theater, which proved a very delightful method of spending the evening while the medical men were occupied with the alumni banquet. The theater entertainment was given by the Women's Auxiliary of Hennepin County.

Thursday, June fourteenth, was given over to a complimentary drive to the country clubs of Lake Minnetonka, and a luncheon was given at the Lafayette Club at which more than four hundred women were entertained. And the reception to the presidents on Thursday evening was followed by a dance, which took its usual course, that is, the visitors were there until very late.

On Friday, from one to five o'clock in the afternoon, a visit was made to Glen Lake Sanatorium, and tea was served there at the Nurses' Home. The rest of the time the women did as they pleased, but they were left but little time to see the shopping districts of Minneapolis. This leads one to the query as to whether too much entertaining is not done at the annual meeting of the American Medical Association. It really leaves but little time for the women to do as they please, or the men for that matter, when they might want to be occupied differently.

The election of officers of the American Medical Association resulted in the selection of Dr. M. L. Harris, of Chicago, as President-Elect, a man so well known that everyone who reads *The Journal of the A. M. A.* knows all about him; and he will honor the American Medical Association in the year 1929-30. The president, Dr. Thayer, will be occupied the entire year with his presidential duties and official meetings with the Board of Trustees and doubtless will attend many other meetings with state organizations as well as meetings which occur in Chicago at the headquarters of the Association. The chairman of the local committee of arrangements, Dr. W. A. Jones, of Minneapolis, the Editor of THE JOURNAL-LANCET, was honored by his election to the vice-presidency, which is a very fitting way of conferring the favor upon the committee in charge of the arrangements for the Association meeting; and he desires to credit his office or at least the greater part of it to his associates who did so much work and who so ably represented the Hennepin County Medical Society in their very excellent arrangements and plans for the entertainment of the Association in general. Dr. Olin West, of Chicago, was re-elected Secretary and General Manager. Dr. F. C. Warnshuis, of Grand Rapids, Michigan, was, as usual, re-elected Speaker of the House of Delegates, and Dr. A. A. Hayden, of Chicago, das re-elected Treasurer.

The golf tournament turned out to be a very successful affair. The tournament occurred on Monday, June eleventh, at the Interlachen Club, while the Woodhill Club and its beautiful grounds were occupied on the afternoon of Thursday, June fourteenth.

One of the pleasing surprises that must be recorded was the offer of the Northwest Nash Motors Company to furnish free of charge a beautiful sedan and a chauffeur for the use of President Thayer during his stay. This is an unusual courtesy, and was most pleasantly commented on; and the ingenious chairman of the subcommittee on transportation was responsible for this arrangement. The Pence Automobile Company also furnished automobiles for some Michigan and Ohio delegates. The people of Minneapolis were very liberal in sending their private cars for the women, and the busses did their share of work. Also, the Yellow Cab Company furnished cab service at twenty-cents per person—an unusually low rate; and it seemed to be a very important factor because it was widely commented on and probably will be more universally adopted if it can be carried out in other meeting places.

The hotels were equal to the service and furnished their quota of the entertainment in a very highly acceptable manner.

A SIDELIGHT OF THE A. M. A. MEETING

A merchant from the country came to town to transact some business and was visiting at the Chamber of Commerce. There he met a friend in the grain business who had in some manner acquired an A. M. A. badge, and in his kindly way he proffered it to the visiting merchant so he could go up and look the Auditorium over and see how he liked the exhibits, etc., which, by the way, were wonderful. Upon arriving there he spied a moving picture of a woman in labor. It attracted his attention, and as he gazed upon it he grew sick at his stomach and fell in a faint, not being an obstetrician. He was carried at once to the first-aid station and there looked after by a doctor and a nurse. When he opened his eyes, after recovering from his fainting spell, the doctor at once inquired his name and his home address in order to be prepared, and the man had to admit that he was not a doctor, that he simply worked his way into the Association meeting through a friend's help. The doctor laughed at him and let him recover—as most people who faint do, without any further medical attention. But it taught the merchant a lesson, namely, not to go places where he was not wanted or invited and not to see all the moving-picture shows that are presented by medical men.

THE FOLLIES OF "MORONIA"

It seems that nothing can prevent the state of affairs that has developed among a certain class of morons. Either they are deficient in their judgment or their attitude toward themselves and others, or they are simply out to make all the money they can without a proper foundation. The latest fad that has swept the country, not only in Minneapolis but in the East, is the marathon dancing; and these people from "Moronia" stay on the floor until they are exhausted, or at least until one of the partners gets to a point of actual indifference or goes to sleep. It is to the shame of many that some of them have endured this remarkable contest for 250 hours; and one man boasted that when he was younger he stuck it out for 100 hours. This really means that these couples are out to dance until they are the last ones on the floor and they are doing it for the sake of a financial reward. One of the contestants hoped to get a thousand dollars so she could make a payment on her house, but the question arises in one's mind as to whether she will be able to run a house or not. However, this jaded performance has been going on in the Kenwood Armory, Minneapolis, since the eighteenth of June. At first there were not many spectators, but gradually the audience has increased, out of curiosity or because they, too, live in "Moronia." It must be very exciting to see these poor people tramping on each others feet, enduring these remarkable hardships and just getting along as best they can.

This derby, as they call it, was expected to continue for a week, with fifteen-minute rest periods every hour for the contestants. It is said that when the dancers lie down for their rest period they sometimes indulge in ether or chloroform, but when this practice was discovered the supply of drugs was cut off. In spite of the fact that a week has passed, there are still ten or twelve couples dancing, or at least going through some motions that are supposed to resemble dancing.

It is presumed that these dancers need the money, and it is to be hoped, if they deserve it, they will get it. This contest is under the auspices of the committee of the Rainbow Division Veterans Association. During the rest periods the contestants partake of food, and a paper pictured a couple the other day showing the man shaving while he was dancing—not a very edifying performance for either party.

Another enlivening spectacle is the man who sits on a flagpole at the top of a building, sitting there until either the flagpole blows down or he falls off. Can anyone imagine such foolishness except in "Moronia?" Think of a man sitting in a curbed seat during a period of days or weeks, just sitting there patiently waiting to outdo some other idiot who has been through the same performance. He must get a vicious thrill out of his act! Or perhaps he gets paid for his services; but his services in sitting on a flagpole are worth nothing, therefore why should he be paid? It seems that one of the glories of the audience or one of the chief looked-for episodes on the part of the audience in these marathon dances or flagpole sittings is reached when a man or woman falls to the floor or ground from sheer exhaustion. It seems quite evident that there are many people who will do almost anything if they are paid for it or watched, and they are quite anxious to exhibit themselves. One can scarcely comprehend or readily imagine the discomfort of the flagpole sitter who is obliged to sit for from five to fifty days. He surely must be very "sore" at the world in general and probably doubly "sore" at himself.

It is said the simplest definition of psychology is behavior, but when we misbehave we are called "misbehaviorists;" and during that period of malbehavior, does our body function properly? Is it possible for a man to keep himself in trim and yet go through these absurd antics of dancing or sitting over a long period of time? Of course there are a number of specialists who have been practicing among a large class from the city of "Moronia." For a while we had a spell of champion coffee-drinkers, and one contestant consumed 61 cupfuls of coffee at one sitting. Why? It only covered a period of a few hours, but in the end he was a champion coffee drinker. What did he get out of that, or, rather, what did he get in that but a lot of coffee and notoriety? But he is no more of a moronite than is the doughnut eater, the pie eater, the ice-cream fiend, and the sauer-kraut consumer. He gets his belly full of food, overstuffs himself, and the only wonder is that these victims are not carried off by death. They must have stomachs of leather or they could not be so inconsistent and occupy the throne of the neuropsychopath. There must be something wrong with the mind of a man or woman who will adopt this method of publicity to gain a point.

The less conspicuous man is the hog caller who goes around the country competing in hog-calling contests. We do not care to disport too freely with this professional class as these hog callers are in great evidence at county fairs, and sometimes these individuals develop quite a voice through their efforts. And the hog, strange as it may seem, recognizes his master's voice and comes quickly to his bidding through some peculiar accent on certain syllables or sound effects. Of course this profession, if they are a profession, wrecks nothing but their voices. One can readily imagine that much calling of hogs would make an impression on the vocal box. But it is a profession and we must hold it in high esteem.

There is another profession that has developed and is almost extinct by this time—the professional automobile driver who is shackled to the car by handcuffs and who goes over the road until he has gone anywhere from 250 to 1,000 miles without stopping the car, taking his food and drink as they are passed to him by some enthusiastic friend as he whizzes by. It seems to the writer that more of these so-called professional classes could be made almost extinct if the newspapers would stop commenting on their foolish endeavors.

Another class that we speculate about are the men who walk from New York to Los Angeles. Again, why? Is it for gain, reward, or publicity, or what not? To think of two men starting to walk from New York to Los Angeles is a grewsome idea when there is no real reason for it. Of course they are probably housed and fed on the way by admiring householders or trained to walk carefully by some promoter; but why he should promote such a performance is a difficult matter to understand.

Last, but not least, are the airplane contestants, both men and women, who are not professional fliers and who know little or nothing about the scientific side of flying but are undertaking dangerous adventures that frequently lead them to the bottom of the ocean, or they are lost on rocks or in storms—all for notoriety or the hope of financial reward. Those who are really trained in flying and follow it as a legitimate occupation are not to be criticized because they are doing it to advance aviation in some form, either commercial or scientific, and they do so under fairly safe auspices except that no one knows what the weather is going to be for the next sixty minutes. These notoriety seekers will fly, however, until there have been a sufficient number of deaths to warrant Congress calling a halt on this method of passing over the country. Or perhaps the government of "Moronia" may itself take a hand in the regulation of these events that excite so much admiration and publicity. Perhaps they, too, will recognize the dangers and difficulties and the lack of judgment apparent in this mental attitude, and, we might say, the insanity of their favorite contestants, and thus bring them down to earth safely.

Everyone knows the dance marathon is only a passing venture of this year and that it will disappear for some new and perhaps equally foolish occupation which may be brought out next year. It does show, however, that we have a type of people that have peculiar minds and lack the qualifications for proper citizenship.

CORRESPONDENCE

THE RURAL PHYSICIAN

To the Editor:

Your editorial in the May 15th issue of The Journal-Lancet is very timely as it calls attention to the problem of the "Rural Physician," a problem much in need of prompt solution. Hence, kindly grant me the space to present a rural physician's discussion of the conditions which constitute this problem of rural medical service and practice. I wish to point out and to emphasize the essential difficulties which beset the majority of rural practitioners because these matters seem to escape the attention of the writers who are offering suggestions. It will be better for our city colleagues to have a clearer conception of the conditions of rural practice, then they will not champion ill-advised or ineffective remedies as many now do.

Regardless of differences of opinion as to its causes and of its solution, the rural physician problem has arisen as a result of great recent changes in the life of our people, in their mode of living and thinking and also of parallel advances and developments in the practice of up-to-date medicine. It is a complex problem, yet, as it applies in practice, the rural physician problem is preeminently an economic problem, plus definite serious matters affecting his professional pride, independence, and attainment. Indeed, fundamentally, it is more an economic problem than anything else, one having serious detrimental effects. Hence, by these limitations it is not one of medical education, scarcity of physicians, or lack of progress on the part of the rural doctor as many of our eminent colleagues have erroneously assumed. Instead, it is a result of a combination of conditions which act as a great handicap which hinders the rural physician from reaping the just benefits of his professional skill and hampers his efforts to render his patients a maximum efficient service.

In plain language, the problem of the rural doctor is that of one who is so handicapped by present-day conditions and methods of practice that he cannot make a go of it. Irrespective of the higher standards of medical education and training of recent graduates, the environment in which the rural physician must live and work is so unfavorable that he cannot attain either financial or professional success. We may best describe his situation by saying that his environment has changed even more than he has been able to adapt his therapy to the new condition. Therefore he is out of harmony with his environment and in consequence pays the price. His position is anomalous. Although he renders a much-needed service, yet he is prevented from enjoying a fit reward for that service. Thus many thinkers have come to the conclusion that the day of the rural physician is come or else near at hand. While at the same time others loudly proclaim that there is a great need of medical service in hundreds of rural areas in our country. Both statements are based upon evident facts. Hence, at the first glance, we might conclude that the simple solution of the rural physician problem should consist of simply moving these impecunious doctors over into these areas where there is a real need for their services and that would remove the difficult. Would it do so? Let us see if it would.

The first prominent and distressing fact is that the country is filled with discontented physicians in a reduced financial condition. They are attempting to live in comfort and a degree of presentability on a too inadequate income for a worthy professional man in a prosperous country in this day and age. And they are far too numerous to classify simply as the misfits and failures of the profession, because a goodly number represent the best type of professional men. Hence we are safe in assuming that their difficulties are not self-induced through personal limitations.

Seeking for an explanation we discover that the causes are varied and lie both within and outside of the profession. First, we are confronted with the fact that the rural public has largely abandoned the small-town physician. At least it has chosen to remove much of its former patronage to the large town and city medical services, thus leaving the rural doctor to shift for himself as best he may. We also note that he is held in scant esteem and little respect by those he has served faithfully although no serious complaint is lodged against him, either personally or professionally. So a large part of his business has left him, in about the same manner that people have abandoned the horse and buggy in favor of the auto. Yet the country doctor still renders an excellent and needed service to a portion of his community in a smaller percentage of their cases, although the total of that service has fallen below the level of what constitutes an adequate and really worthwhile practice. In hundreds of instances this decline has been so great that the rural doctor has finally sought a better practice in a more congenial location, thus leaving hundreds of small towns with no local medical service.

Explanation for this public indifference to the rural doctor may be interpreted to signify that his service is poor, that he is a failure, that he has failed to satisfy. This latter is unquestionably the fact: he has failed to satisfy. But not because his standard of service has lowered. Instead, the shoe is on the other foot. The standard of service which his patients demand is higher, increased surprisingly, perhaps unjustly and unreasonably. The greatest change has come in the rural public. There is now a universal desire of the rural public to enjoy the best of everything. They tell us they want the best doctor, the best hospital, the best education, the best auto, the best farm implements, the radio, the telephone, the electric light, and so on. And practically all who have the means avail themselves of most of these comforts of modern life. So we no longer have a really rural population in spirit and ideas. Its ideas have become urban. From its daily papers it learns of city life and city ways. And just as the city resident is "sold" on the most cleverly advertised brand of soap or tooth paste so also is the rural resident "sold" on the prominent city surgeon, the elegant showy office, and the large hospital with its host of uniformed nurses. But on the other hand it is not "sold" on its unassuming but faithful country doctor. He is just "home folks," a nobody.

Not the least of many factors educating the public away from its rural medical service is the advance of surgery in the field of therapy, the use of highly technical tests in diagnosis, and elaborate equipment used in many forms of therapy. All of which automatically remove many cases from the hands of the country physician lacking elaborate equipment and trained helpers.

Next we find three major factors which also help to steal away the rural doctor's patients,—the large hospital, the auto, and good roads. Formerly the rural public stayed at home when it was ill, and the "old family doctor" nursed it along until it recovered or died. Now it is educated into consulting the city surgeon or specialist, who promptly bundles it off to the efficient but terribly expensive hospital where it is operated on, "studied," "observed," *x*-rayed, analyzed and tested, and finally treated until it goes home "broke" for months into the future. But that is not all. It goes home enamored of the showy and spectacular side of modern medicine. Because the ill-informed public fails to discriminate between the case which demands the acme of facilities for its relief and the far more frequent but hopelessly commonplace case which may yield to the means available in rural practice. Anyway, the rural patient has been educated away from his conveniently inexpensive rural medical service.

Naturally these conditions react upon the small-town physician disastrously. He becomes a prophet without honor in his own community. His fellow-citizens and patients lose faith in him. His practice declines; he finally is forced to give up and move away.

Then from these doctorless rural districts come loud wails because the doctors have "abandoned" the country people. Yet these complaints are mere piffle, because when a new man moves in he also experiences the same difficulties, and he moves away. Naturally these people also berate the doctors as robbers and cutthroats because the then available distant urban medical service of their choice is heartlessly expensive. Necessarily it is, although calls which cost ten, fifteen, or twenty dollars are often extravagantly out of proportion to the benefit derived therefrom and are usually far beyond the means of the patient. However, the small town resident equally objects to paying any local doctor a fair fee for a like service. He is always a complainer. This is certainly an irrational and unfair attitude which finds expression in silly complaints, and the habit of using the waiting auto as a means to ride away for miles to consult the large-town doctor for minor ailments, not to mention major illness. Indeed, this unfriendly attitude is carried to absurd extremes. If cases do not respond immediately to the local doctor's therapy many will at once seek a city physician who necessarily may use the same therapy. Too often the only benefit is increased expense of treatment. Hence, regardless of the real need of a more inexpensive medical service in many doctorless communities having sufficient population to support a physician, they are not inviting locations. Very often there is a sort of poetic justice in their predicament.

Unquestionably the National Grange was sincere in its complaint concerning the lack of rural medical service. However, it is doubtful whether it made any adequate investigations into the causes of this situation, which are so evident. Quickly they would have discovered the fallacy of statistics and the unfavorable situation of the rural doctors. Else why are the numberless open locations not quickly filled by the host of impecunious physicians seeking better locations?

We must not forget that what the public thoughtlessly calls a "good location" or "a place where they need a doctor" may be any sort of uninviting, forsaken, "tank-town," and a lamentably poor place in which to live and to prosper. In this connection single facts are often illuminating. Only last week a drug salesman informed me: "The doctors are leaving the small towns. Thirty-six doctors have moved away from small towns in South Dakota since I took this territory a year ago last January." And he would not cite a single one of these places as a good location for practice!

Now let us consider the influence of a good rural hospital. Without an efficient and pleasingly managed local hospital any small town is unquestionably rural and certainly is a poor location, with rare exceptions. In such locations, the majority, the rural physician loses all of his major surgery cases, many difficult medical cases, many confinements, and an increasing number of specialty cases—and therewith the larger fees which his practice should yield. Perforce he must be content with the "leavings" from a good income his practice should yield. He must turn over, or he loses, all these cases to his consultants and the surgeons who in reality become his competitors.

To the rural physician problem the auto and good roads contribute a most destructive effect. This greatly overbalances the advantages they confer. Frequently they destroy an otherwise fair location if there is no good local hospital or if a larger town or city is relatively near. Thus a state road, five miles away, changed the most profitable territory of my location into the poorest and my income proportionately.

Virtually the auto has placed our rural population on wheels, whereas it was the most stable. It reduces distances to nothing. It has brought city competition into every mile of the rural doctor's territory on terms to his disadvantage. Where formerly he had one or two real competitors, or none, now he may have a dozen. A single distant "clinic" may take more money out of his territory than his total business. Although the city doctor makes few calls far into the country the country patient is easily transported twenty, forty, or 100 miles to a popular consultant or surgeon. Indeed, the auto has revolutionized rural practice more than all other factors.

Formerly the doctor who made half a dozen country calls and attended his town and office practice was indeed busy. Now with his auto he is able to cover a hundred miles of territory and attend his other business with ease. The auto has multiplied the range of his service a dozen times and enabled him to give his cases a real study, though with little benefit to himself financially when he does not get the business. Hence, if our physicians were evenly distributed we would quickly discover our oversupply. Yet there are those who tell us we need more doctors, even more poorly educated doctors! Only during "flu" epidemics are rural physicians even moderately busy for brief periods.

Another factor of rural practice given scant mention is that the rural population is surprisingly healthy. Certain diseases have almost disappeared. So the actual total of rural business per hundred persons has decreased. Typhoid, smallpox and diphtheria have almost disappeared and only occur in limited, isolated attacks. Scarlet fever is quickly checked. Dysentery and summer complaints are few. Measles and whooping cough are universal as ever, but a doctor hears of more cases than he sees even once. So common colds, the "flu," and pneumonia are the chief revenue-producing infections. The higher plane of education and living conditions have wrought these wonderful changes. Last, and not least, confinements have decreased a half since contraceptive measures have become universal knowledge and the busy abortionist has gained a popular vogue.

Of course we must not overlook the inherent difficulties of country practice: crop failures, stock losses, the shiftless, drifting renter-farmer, frank deadbeats, storms, intense cold, delayed collections and vicious tongues. Indeed, when we tabulate all the factors which bedevil rural practice we are surprised that even a few men are able or fortunate enough to attain a local eminence and thus earn a worthwhile income, not just a bare existence. But such are increasingly rare.

Obviously, the only solution of the rural doctor problem, and its fellow, the rural medical service problem, is to restore the country doctor more nearly to the level of his colleagues and competitors in the large town and city. To make rural practice endurable or even attractive by giving him adequate facilities to render efficient and attractive service. Instead of being the tail-ender the rural man needs to be the exceptionally able and well trained man. In the majority of locations, even the advantage of a small hospital and a fair degree of surgical skill makes all the difference between the comfortable income and just shabby genteel.

In the smaller towns and thinly populated districts, where a hospital may not reasonably be maintained, other measures must be tried—a bonus, a salary, a partnership in the city group, restriction of competition—or such means as meet local conditions. It is granted that these are not ideal conditions, though they are practical. It is evident that the rural communities must follow the lead of the city and large town by establishing hospitals and thus assume a part of the burden of their own medical service. Else the forward-looking ambitious youth with his expensive education and training will refuse the "blind-alley" location in which at the end of his practice he will face old age in penury and oblivion. Therefore it is the public which needs more education than our doctors.

Letcher, S. D., P. P. Halleck, M.D.
June 20, 1928.

MISCELLANY

A. M. A. AWARDS FOR SCIENTIFIC WORK DURING THE PAST YEAR

The American Medical Association, at its meeting in Minneapolis last month, made seventeen awards for scientific work in medicine. Three of them went to research workers in the University of Minnesota, one to a worker in the Mayo Clinic, and one to a physician in Fargo, N. D. The Committee on awards was composed of men of national standing, and the awards were given as follows:

Dr. B. J. Clawson, for a study emphasizing clinical and experimental phases of the inflammation of the heart muscle.

Dr. Richard E. Scammon, for exhibits on the growth and structure of the human body.

Dr. Leo. G. Rigler, for his work on the relation of the esophagus and heart and aorta.

Dr. D. T. Horton of the Mayo Clinic and Foundation, for research on the pyloric block.

Included among a total of seventeen awards granted by the Association to American scientists, the State University men brought to their institution the largest number of awards granted any medical school or college.

One of the other awards of merit granted was given to Dr. Cyrus N. Callender, of Fargo, N. D., for surgical anatomic drawings.

NEWS ITEMS

Dr. J. Frank Walker has moved from Bison, S. D., to Lemmon, S. D.

The A. M. A. goes to Portland, Oregon, for its next annual meeting in 1929.

Dr. Warren E. Bradbury, of Washington, D. C., will locate in St. Paul in September.

The Minnesota Hospital Association will hold its annual meeting next year in Rochester, Minn.

Dr. R. O. Leavenworth, of St. Paul, has returned from a three-months study trip in Europe.

Dr. L. C. Bacon, of St. Paul, has gone to Europe to spend three or four months in the clinics.

Bethesda Hospital, of Crookston, is celebrating its thirtieth anniversary to-day with appropriate exercises.

Dr. Anton Hyden, of Bowdle, S. D., has gone to New York City to do postgraduate work in medicine and surgery.

The Homeopathic and Electric Medical Associations of South Dakota were holding a joint session at Sioux Falls yesterday.

Dr. George E. Sherwood, of Kimball, Minn., has gone to Europe as a delegate to the World's Dairy Congress from this country.

Dr. Henry E. Michelson has been promoted from assistant professor to professor of dermatology and syphilis at the University of Minnesota.

Dr. W. D. Sheldon, of the Mayo Clinic, is the champion golf player of the A. M. A. as demonstrated on the links in Minneapolis last month.

Dr. Philip L. Halenbeck, who practiced several years in Crosby, has established practice in St. Cloud with offices in the First National Bank Building.

Dr. Horace Newhart, of Minneapolis, was elected president of the American Federation of Organizations for the Hard of Hearing at the annual meeting of the Federation in St. Louis last month.

The names of the four Minnesota and one North Dakota men who were voted awards of merit for distinguished research medical work last year are given on another page.

Dr. Clarence Moran, of Armour, S. D., a recent graduate of Creighton University, School of Medicine, received the prize for the highest standing in his class during his course.

At the annual meeting of the South Dakota State Hospital Association, held in Sioux Falls last month, Dr. Percy D. Peabody, of Webster, was elected president for the current year.

Dr. Samuel S. Jones, of Frazee, Minn., who graduated from Rush in the class '81 and began practice in Minnesota soon after graduation, has moved to Minneapolis and retired from practice.

Dr. Paul W. Friese, of Bismarck, N. D., was married last month to Miss Alma Klusman, of the same city. Both Dr. and Mrs. Friese were connected with the Quain & Ramstad Clinic of that city.

Miss Florence Walker, of Waubay, S. D., Chief of the Division of Child Hygiene of the State Board of Health, was elected president of the State Graduate Nurses' Association last month.

The two hospitals at Warren, Minn., the Warren Clinic and the Hedgewood Hospitals, have been consolidated, the name of the former being retained. The staffs of the two hospitals will continue together.

Mrs. Newhart and Mrs. Adair, the wives, respectively, of Dr. Horace Newhart and Dr. F. L. Adair, of Minneapolis, were elected officers of the Women's Auxilliary of the American Medical Association at its meeting last month.

Dr. Stephen Fisher, of New Salem, N. D., died last month at the age of 52. Dr. Fisher was a graduate of the Milwaukee Medical College, class of '03, and had practiced in North Dakota since graduation.

The Wabasha County Medical Society, of Minnesota, meets on the 5th inst., at Plainview. Papers will be presented by Dr. W. J. Cochrane, of Lake City; Dr. D. P. Dempsy, of Kellogg; Dr. D. M. Masson, of the Mayo Clinic; and Dr. A. S. Anderson, of St. Paul.

Dr. Henry H. Frudenfeld, of Minneapolis, died on June 20, at the age of 52. Dr. Frudenfeld was a graduate of the College of Medicine, University of Illinois, class of '02, and had practiced here for the past ten years. He was an eye, ear, nose, and throat specialist.

Dr. W. J. Mayo, of Rochester, received the honorary degree of LL.D. frem Carlton College last month, and he delivered the commencement address of the college at the same time. Dr. Longstreet Taylor, of St. Paul, received the same honorary degree from his alma mater, Haverford College, Haverford, Pa.

The Golden Cross of Merit has been given to a former Minneapolis nurse, Miss Hauft, by the government of Austria for distinguished services in training nurses in Vienna. Miss Hauft was born in Minneapolis, graduated from the University of Minnesota, and is now associated with the Commonwealth Fund of New York.

Among medical books just from the press and written by Northwest men is a translation of a work on "The Duodenum" by three distinguished members of the Surgical Clinic, Faculty of Medicine Faculty, Paris. The translation was made by Dr. E. P. Quain, of Bismarck, N. D. The other is "A Handbook of Clinical Gynecology and Obstetrics" by Dr. R. T. La Vake, of Minneapolis. Both books will be reviewed in these columns at a future date.

The total registration at the A. M. A. meeting last month in Minneapolis, up to Friday, was 4,876. The total registration from Minnesota, the two Dakotas, and Montana for the same time was 1,777; and from Wisconsin and Iowa over 650 registered. Of the registration in the Sections (sixteen in number) there were 1,564 in the Practice of Medicine and 1,059 in Surgery (general and abdominal). The final total (including Friday's registration) was 5,036.

The Committee on Arrangements for the annual meeting of the South Dakota State Medical Association, at Hot Springs, on August 7, 8, and 9, earnestly request all who are to attend the meeting to make their hotel reservations at an early date. Hot Springs is a cool place in August and tourists are plentiful and hotels may be taxed to capacity. A good time and a good meeting are promised. Address Dr. Alfred G. Allen, Hot Springs, S. D., for full information.

The Minnesota State Medical Association

The annual meeting of the Minnesota State Medical Association, which was held on June 11, was purely a business meeting at which no papers or addresses were given,

The election of officers for 1929 resulted as follows:

President, Dr. J. T. Christison, St. Paul; first vice-president, Dr. A. G. Liedloff, Mankato; second vice-president, Dr. C. O. Estrem, Fergus Falls; secretary, Dr. E. A. Meyerding, St. Paul; treasurer, Dr. Earl R. Hare, Minneapolis; councilor, third district, Dr. H. M. Workman, Tracy; councilor, fifth district, Dr. F. J. Savage, St. Paul; councilor, seventh district, Dr. W. W. Will, Bertha; delegates to the American Medical Association: Dr. H. M. Johnson, Dawson; Dr. W. F. Braasch, Rochester; Alternates: Dr. B. S. Adams, Hibbing; Dr. O. J. Hagen, Moorhead.

Location or Substitute Work Wanted

By an experienced physician. Address 485, care of this office.

Woman Physician Wanted

At the Home School for Girls at Sauk Center, Minn. Apply to the Supt., Mrs. Mary L. Stewart.

For Sale

Stereoscope and Allison Operating Table; suitable for office use. Call Main 7879, Minneapolis, between 9:00 and 12:00 a. m., or address 484, care of this office.

Nurse Wants Position

A competent nurse with several years of hospital management experience desires position of merit in doctor's office, clinic, or hospital. Address 490, care of this office.

Location Wanted

By a general practitioner in a good town with a prosperous territory. Unopposed practice desired. Address 495, care of this office.

Physician Wanted

In an inland county-seat town; large unopposed territory; 200 population. Good opportunity. Address the Bison Commercial Club, Bison, South Dakota.

Association Wanted

By a graduate of the U. of M. Medical School who took his internship of one year in the Minneapolis General Hospital and one year in surgery and gynecology in the Swedish Hospital. Can understand German and Swedish but speaks only English. Age 27. Address 494, care of this office.

Desirable Location and Office in North Minneapolis Open

An established dentist in North Minneapolis who has just moved into offices in a new modern building in a splendid location desires to have a physician in the adjoining offices. Opening is a fine one. Telephone Hyland 2945 or address 493, care of this office.

Fine Location for Physician in Minneapolis for Rent

In a new up-to-date heated building under construction at corner of 40th and East Lake Street. A dentist has already taken lease in the building for five years. Also up-to-date living rooms on the same floor. Rent, moderate. Address Manville Mandel, 320 Lumber Exchange, Minneapolis, or Telephone At. 1885 or Hy. 0182.

Work Wanted

Physician, 33 years old, married, desires assistantship or partnership to a doctor with large obstetrical and surgical practice. Licensed in Iowa and North Dakota. Five years successful country practice. Reasons for desiring change: poor collections, oldest child beginning school. Applicant has some hospital training. Strictly ethical. Speaks German and French. Ready to leave November 1, 1928. Address 487, care of this office.

Equipment for Sale

Prometheus electric sterilizer, large size, with 3-heat switch and automatic cut-off; separate compartments for sterilization of instruments and dressings, mounted on white enamel tubular steel stand; may be used on direct or alternating current. Used but little. Good as new. Cost $86.50 f. o. b. factory. Will sell for $50 plus freight. Baldwin operating table complete with full leatherette reversible cushion, removable shoulder rests, knee slings and heel rests. Is of heavy tubular steel construction with white enamel finish. Has central slot and sliding drainage tray and drip basin. May be used for all work. Cost $85 f. o. b. New York. Will sell for $50 plus freight. Address 489, care of this office.

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FIRST MONTHLY CLINICAL CONFERENCE AT THE MINNEAPOLIS GENERAL HOSPITAL

Department of Obstetrics and Gynecology

January 31, 1928

C. M. Carlaw, M.D. F. L. Adair, M.D.
R. M. Pederson, M.D. J. H. Simons, M.D.
MINNEAPOLIS, MINNESOTA

By C. M. Carlaw, M.D.

I. *Retroversion of the uterus.*—The operative treatment by modified Gilliam technic of suspension of the uterus, drawing the round ligaments on either side through the internal inguinal ring and suturing them fan-shaped on the anterior rectus fascia. Report of two cases recently operated on by this method.

Case 1 is that of G. S., aged 22, single, housewife, admitted to the Minneapolis General Hospital, January 18, 1928.

P. C.: 1. Pain in back for two years. 2. Pain in right side. 3. Gonorrhea for six months.

P. I.: Patient has had pain in the right side of the pelvis and in the back for two years. This has remained about the same for the last two years. At the menstrual period, another cramp-like pain is superimposed on this pain and is located in the lower sacral region. Patient had a positive smear for G. C. in September and has been under treatment.

P. H.: 1. Lues three years ago. Treated until November, 1927. Wassermann, negative. 2. Menstrual history. Started at fourteen, not very regular. Usually twenty-eight days. Flows seven days with much cramp-like pain.

Physical: Negative except for pelvis, which showed slight periurethritis, Bartholinitis, lacerated but competent perineum, slight cervical discharge of a seropurulent nature, cervix pointed downward and forward, slightly hypertrophied, mild endocervicitis. Corpus retroflexed and retroverted, 3,° not replaceable. Adnexa negative.

Pre-operative diagnosis: 1. Retroflexion-version of uterus 3.° 2. Endocervicitis. 3. Bartholinitis. 4. Periurethritis.

Laboratory: Urine, negative. Blood: Hgb. 78 per cent; R. B. C., 4,130,000; leucocytes, 10,000; P. M. N's., 64 per cent. Sedimentation time, three hours. Wassermann, negative. Smears, negative for G. C. Temperature and pulse, normal.

Operation: January 20, 1928, for suspension of the uterus. The uterus was in 3° retroversion and flexion, was replaceable. Tubes, ovaries, and appendix were normal. Uterus was suspended by the modified Gilliam technic.

Case 2 is that of F. S., aged 42, married, housewife, admitted to the Minneapolis General Hospital, January 21, 1928.

P. C.: 1. Pain in back. 2. Pain in abdomen (lower). 3. Duration of symptoms, six years, onset dating from birth of last child six years ago.

P. H.: Negative except for mumps, measles, scarlet fever when a child.

Physical: General physical essentially negative. Pelvis shows a relaxed and incompetent pelvic floor bilateral laceration 1° and points downward and forward. Slight endocervicitis. Slight mucopurulent discharge. Corpus is in 3° retroversion and retroflexion and not moveable. Adnexa negative.

Preoperative diagnosis: 1. Relaxed pelvic floor. 2. Cystocele and rectocele 2°. 3. Retroversion of uterus 3°. 4. Chronic endocervicitis.

Menstrual history: Regular, duration five days, interval 30 days. L. M. P., January 6, 1928.

Has seven children all living and well. Last child six years ago in March. Oldest child is seventeen. Laboratory: Urine, negative. Blood: Hgb., 104; R. B. C., 5,090,000; W. B. C., 7,800; clotting time, three-fourths of a minute; bleeding time, one and one-half minutes: sedimentation time, one hour, ten minutes. Smears, negative for G. C. Temperature and pulse, normal.

Operation, January 23, 1928. The uterus lay in 3° retroversion-flexion and in left lateral version. Appendix was normal and not removed. Both tubes and ovaries were normal. Uterus was suspended by the modified Gilliam technic. A perineorrhaphy was done following the Hegar technic. Patient had a normal convalescence.

In commenting upon this subject, I would like to state that there has been in the past no other pelvic malady that has been so much abused by operation. It has been the cause of many unnecessary operations.

It must be remembered that there is no one place in the pelvis where the uterus must be confined in order for it to be normally situated. In Europe a uterus that has its fundus back of the transverse plane of the pelvis inlet is considered normal. It makes very little difference whether the uterine body is in front of the pelvic inlet midline or behind it. The mere fact that it is behind this plane is not in itself an indication for operation. Such a position of the uterus in the absence of inflammatory or other pelvic conditions is symptomless. For such position to become pathological there must be some prolapse and lengthening of the utero-sacral ligament. As soon as the uterus begins to prolapse, then and then only do symptoms begin and the condition becomes pathological. Even this condition is not always productive of symptoms. In many cases the uterine symptoms which we often attribute to retroplacement, with early or minor descent, are not relieved by operation, and two or three months after operation our patient returns, much to our chagrin and the patient's dissatisfaction, with the same old symptoms unrelieved. A very good test in cases where we are doubtful as to the advisability of an operation is to first hold the uterus up with a boroglyceride pack and allow the patient to go about with her regular duties for twenty-four or thirty-six hours. If she reports much relief while the packing is in place but with a return of her symptoms soon after it has been removed, we can infer with a fair amount of certainty that an operation will give her the necessary and expected relief.

The operation we have been doing for several years for retrodisplacements when it is not contra-indicated is a modification of the Gilliam operation. In the original Gilliam operation, as you know, the abdomen is opened in the median line, which has the advantage of allowing you to explore the pelvis and abdomen and remove the appendix and correct the pathological findings. We then bring the uterus up in position and grasp the round ligaments one and one-half inches from the uterine horns. Then we pierce the recti muscles about an inch from the incision with a pair of forceps and catch the ligaments where the forceps have been applied and draw the ligaments through the muscles and fix the withdrawn portions to the overlying abdominal fascia; then close the abdomen. The disadvantage of this procedure is that it leaves three openings at the bottom of the abdomen proper, into the true pelvis: one over the fundus of the uterus, the other two laterally between the withdrawn round ligaments, and their entrance through the internal inguinal openings. Through any of these openings coils of intestines are liable to pass and become incarcerated.

The modification we do is to dissect back the skin and superficial fascia about one and one-half or two inches to the internal abdominal ring. The abdominal fascia is here wiped smooth and clean with a piece of dry gauze to promote firm union. Then by slight traction on the forceps applied to the round ligament, we can readily see where they leave the abdomen to enter the inguinal canal. Then we take an ordinary curved pair of forceps, not too sharp because the deep epigastric artery is in this immediate neighborhood and must not be injured, and thrust it through the abdominal wall into the broad ligament and push it along between the two layers as far as the forceps on the round ligaments, then push the forceps through the peritoneal wall of the broad ligament and grasp the round ligaments at this point and withdraw the forceps with the ligament in their grasp. Pull them through until the slack in the round ligament is fully taken up. Then place two small forceps, one above and the other below, on the protruding stump of the round ligament and pull them out in a fan shape. At these points fasten the stump to the external abdominal fascia with a single No. 1 catgut suture. This will leave a broad three-cornered anchorage, which when united will give ample security for its new purpose. Should the stump show lividity after being anchored, pass a closed forceps through the opening in the abdominal wall and then open the handles and stretch the opening larger to permit of a more free circulation of blood. The abdomen is then closed in the usual way which completes the operation. If there has been much venous bleeding in dissecting back the skin and superficial fascia a small wick of rubber is placed in each pocket and left there for twenty-four or thirty-six hours for drainage. This operation has given us excellent results. Many of our cases have gone through one or more pregnancies and no ill effects have been reported.

By R. M. Pederson, M.D.

II. *Case of unruptured ectopic pregnancy.*—Diagnosed at three and one-half weeks gestation by history and physical findings. Operation performed showing intact specimen for demonstration.

Case 1 is that of D. B., aged 26, married, gravida 2, para 2, admitted to the Minneapolis General Hospital, January 14, 1928.

P. C.: 1. Pain in left lower abdomen. 2. Menstrual disorder. 3. Weakness and loss of strength.

P. I.: Last menstrual period was December 23-24; duration, five days; normal. Usually is a 28-day type, no pain, duration four to five days; next normal period should be January 21-23. On January 13, at 6 P. M., there was a gradual onset of sharp cramp-like pain in the lower left quadrant sufficient to double the patient up. This became worse on standing or bending. Lying down relieved the pain some. On admission there was a dull constant ache in the lower left quadrant. No nausea or vomiting. No dysuria, no discharge.

P. H.: Negative except for two previous pregnancies in 1923 and 1927, both normal. No miscarriages; D. and C. three years ago; reason unknown.

Physical: Negative except for slight tenderness in lower left quadrant. Pelvic examination showed mucopurulent discharge from vagina, cervix 1° bilaterally, lacerated, points downward and forward, eroded and inflamed, corpus slightly enlarged and somewhat softened, 2° retroversion, movable and tender on motion; right adnexa negative; left adnexa show marked tenderness. There is a small mass in the left cul-de-sac.

Impression: 1. Ectopic pregnancy unruptured. 2. Left salpingitis. 3. Retroversion 2.°

Laboratory: Urine, negative. Blood: 77 per cent and 76 per cent; R. B. C., 3,860,000 to 4,210,000; W. B. C., 12,000 to 10,100. P. M. N., 90; Wassermann, negative; Smears, negative; Temperature and pulse, normal.

Pre-operative diagnosis: 1. Ectopic pregnancy unruptured. 2. Retroversion of uterus 2.°

Operation: On opening the abdomen the intestines were found to be blood stained. The appendix was normal but was removed. The left side of the cul-de-sac showed numerous dark blood clots and free blood, 100 c.c. in all. Uterus enlarged and in 3° retroversion. Right tube and both ovaries were normal. The left tube had prolapsed down into the cul-de-sac, and the distal two-thirds was the site of an extra-uterine pregnancy, 4x2x2 cm. in size. It was unruptured, but there was a tubal abortion in progress. The left tube was removed, and the uterus was suspended in the modified Gilliam technic.

The post-operative course was normal.

The importance of an early diagnosis of this condition is obvious, as steps can be taken at once to remedy the condition and a tragedy avoided. The mortality of ectopic gestation in our best clinics is over 10 per cent in the cases seen after rupture has taken place.

Statistics of recent years show this condition to be on the increase. The most reliable statistics show one ectopic to every 303 conceptions. This figure may, of course, be influenced by our more accurate diagnosis in recent years.

Age seems to be no factor. The greater part of ectopic pregnancies occur, of course, during the most active child-bearing period—from 24 to 32, but the accident may occur anytime between puberty and the menopause. It is not more frequent after long periods of sterility, as was previously supposed. There is probably no seasonal variation. We have observed here at the General Hospital that ectopic operations are more frequent in the early spring.

A few words on the etiology of this condition:

No single cause seems to operate in producing this condition. There must be, of course, a partly patent tube which will allow the passage of the spermatozoa but will not allow the fertilized ovum to reach the uterine cavity at the proper time. This cause may be in the lumen of the tube. There may be congenital deformities, diverticulæ, etc., or the mucous membrane may have been injured by mild salpingitis, which has destroyed the ciliated epithelium, the motions of which are supposed to aid in the progress of the rapidly growing fertilized ovum. There may be stricture of the tube or the cause may be external to the tube itself. Any inflammatory disease of the peritoneum, including ruptured appendicitis, gall-bladder, ulcers, and diverticulæ of the intestine may produce enough peritubal adhesions to cause this condition. Neoplasms of the ovaries, tubes and uterus and displacements of the uterus and ovaries may be producing direct pressure or kinks in the tubal lumen producing this condition.

Surgical operations to correct gynecologic conditions are a cause of ectopic pregnancy as it is prone to occur in women whose pelvis has been invaded by the surgeon. A history carefully taken will usually point towards the diagnosis. All women during the child-bearing period should be considered pregnant until proved otherwise. This same remark can be used about abortions. All abnormal menstrual disturbances should be looked upon as possible ectopic pregnancies until definitely ruled out.

Philander Harris has stated that when a woman who, during the child-bearing period, has been menstruating regularly and painlessly goes 4. 5, 10, 15, or 18 days past her period, sees blood from the vagina differing in color, quantity, and character from her menstrual flow and has pain in the pelvis on one side or the other or in the hypogastric region, ectopic pregnancy may be presumed. The history given in most cases is that they have gone over their expected period for a few days to several weeks and they have noted a small amount of blood, usually brownish mixed with mucus, and that they have had pain in the pelvic region of an unusual character. The pain may be accompanied by dysuria and may be very intense during defecation. The intelligent woman who has previously been pregnant seeks medical aid at this time. Usually she thinks she has a displaced uterus or is the victim of a cancer or a tumor. The other symptoms we can elicit are those of normal intra-uterine pregnancy. Morning sickness may be present but of a milder degree than in intra-uterine pregnancy. Breast changes with tingling and secretions from the nipples are sometimes noted. The darkened areola and linea nigra, cyanosis of the vagina, and softening of the cervix should be looked for. The corpus is usually slightly enlarged but not in the proportion to the length of the supposed gestation. Hegar's sign, of course, is absent. A very tender mass is usually noted at the side of the uterus or in the cul-de-sac; it may be sausage-shaped. If there has been leakage of blood in the cul-de-sac, even if no rupture has taken place, there will be a "doughy feel" of a mass in the cul-de-sac. Passage of decidual shreds, when noted, is of considerable diagnostic importance.

Blood examination is not of much value at this stage. Slight polynuclear leucocytosis—about 12,000—is usual if there is much leakage of blood from the tube into the peritoneal cavity, but no lowered hemoglobin or erythrocyte count is usual at this stage. A slight temperature and rise in the pulse rate is noted, due to irritation of the peritoneum from the extravasated blood. The Abderholden test is probably of no value and has been discarded as a routine measure.

The treatment is, of course, surgical when the diagnosis is established. The condition is too serious to allow of any procrastination. Measures like *X*-ray to kill the ovum and allow absorption should not be resorted to as massive doses of *X*-ray probably will do more harm to the structures than a skillful laparotomy.

By F. L. Adair, M.D.

III. *Toxemia of pregnancy.*—Report of an unusual case characterized by a chronic glomerulonephritis with an acute exacerbation during the 6th month of pregnancy, accompanied by albuminuria, hypertension, anasarca, albuminuric retinitis, and convulsions probably due to uremia. Induction of labor by bag insertion. Slow recovery with satisfactory outcome two and one-half months postpartum.

M. E., aged 24, was admitted for the second time to the Minneapolis General Hospital on November 3, 1927. Prior to her admittance in January, 1926, her past history had been negative except for measles at the age of fourteen.

On the first admission, there was a generalized anasarca, a blood pressure of 186/130, with 4+ albumin but no casts. The blood creatinine was 1.62 mg. per 100 c.c. blood, the urea 24.5 mg., and the non-protein nitrogen 45.2 mg. Eliminative treatment was used, and a spontaneous abortion of a three months' fetus resulted in a marked improvement. At the time of discharge the blood pressure was 164/100, and there was a trace of albumin in the urine.

On the day of her second admittance the patient showed a pregnancy of 26 weeks, the last menstrual period being April 15, 1927, and the date of expected confinement January 22, 1928. She had had no prenatal care, or any observation between her first and second pregnancy. Her chief complaints on admission were headache, blurred vision, and a generalized edema.

Physical examination showed a young female with a marked pallor of the face, marked edema of the face, and puffiness about the eyes so extensive as to almost close the lids. There was also edema of the entire body, especially marked in the lower extremities, where deep pitting on pressure was present. The pupils were equal and reacted to light; the teeth were in poor condition, there being four carious upper teeth that needed extraction; the tonsils were atrophic and buried; the thyroid was not enlarged. The breasts showed the usual signs of pregnancy. The heart and lungs were essentially negative. The fundus of the uterus was palpable two-finger breadths above the umbilicus, and the fetal heart was heard in the right lower quadrant, regular with a rate of 160. The pelvic measurements were normal. Vaginal examination showed an undilated cervix lying high in the pelvis. There was an acute endocervicitis with marked purulent discharge.

The pupils were dilated and the fundi examined. Both fundi showed numerous areas of whitish exudates, areas of hemorrhages, and marked edema and swelling of the retina. This was diagnosed as an albuminuric retinitis.

The blood pressure on admittance was 252/174. The urine showed a specific gravity of 1.011; albumin four plus and many red and white blood cells. A quantitative Esbach's estimation showed six grams of albumin per liter. The Wassermann reaction was negative.

Two hours after admission, the patient had a convulsion lasting two minutes followed by a period of coma; this was followed by another convulsion one hour later. It was deemed advisable to terminate the pregnancy at this time. Under nitrous oxide-ethylene anesthesia, the cervix was sufficiently dilated to permit the introduction of a No. 3 Vorhees bag. The bag remained in the uterus for seventeen hours during which time she had two more convulsions. One and one-half hours after the expulsion of the bag a spontaneous delivery of a stillborn fetus of about twenty-six weeks gestation occurred. There was no maceration. The fetus presented by the breech. The placenta was complete, there being several small areas of whitish infarcts present.

During the time the bag was in situ the Stroganoff treatment was used with alternate doses of morphine and chloral hydrate sufficient to force the respirations down to 8-10 per minute. The pulse during this time varied between 120 and 160 per minute. Adjuvant treatment consisted of a gastric lavage and colonic irrigation with glucose and soda bicarbonate solution to promote elimination. Fifteen minutes after delivery the blood pressure dropped to 210/150, and 45 minutes after delivery it had dropped to 170/120. The patient's general condition was fairly good, and the prognosis favorable at this time.

At the end of one month post-partum the hemoglobin was 70 per cent and the R. B. C. 3,440,000, the lowest findings having been hemoglobin 40 per cent and R. B. C. 1,930,000. A P. S. P. test for kidney function at this time showed 45 per cent of the dye excreted in the first hour and 24 per cent excreted in the second hour, a total of 69 per cent.

The eye-grounds at this time still showed evidences of recent hemorrhages, whitish spots of exudation, which were slowly absorbing, and a few spots of hyaline degeneration. There was also some swelling and edema of the retina with a definite elevation of the vessels at the disc margin. The condition of the fundi was definitely improved since the first examination.

During the 6th week post-partum there was a change in the patient's condition characterized by upper abdominal pain with nausea and vomiting persisting for a few days. Examination at this time showed tenderness and muscular rigidity over the right upper quadrant; no enlargement of the spleen or liver; and a slight icteric tint to the skin. The blood pressure rose to 190/130, and the patient suddenly went into a typical convulsion lasting a few minutes and followed by a period of coma. This convulsion was again repeated on the following day, lasting only a few minutes.

During the remainder of the second month post-partum the convalescence was undisturbed and recovery rapid. The urine during this time contained from two to four plus albumin and occasional casts. Quantitative estimations varied between 0.45 gms. and 1.75 gms. of albumin per liter. Daily 24-hour specimens of urine showed a fixation of specific gravity ranging between 1.006-1.015. The blood pressure varied between 154/130 to 176/134; the temperature was entirely normal; and the pulse averaged 80-90.

At the end of the ninth week after delivery the patient was up and about; on a salt-free low-protein diet; the four carious teeth had been extracted, the condition of the fundi had further cleared up, and the general condition was good.

This case is of interest for several reasons:

First, a definite toxemia occurring in the same patient in her first two pregnancies.

Second, the early termination of pregnancy, the first time spontaneously at three months and the second time artificially at six and one-half months.

Third, the marked similarity of the findings in the two pregnancies.

Fourth, the presence of a definite chronic glomerulonephritis rather than the usual type of nephritis encountered in these conditions.

Fifth, the probability that the present condition was an acute exacerbation of a chronic nephritis and that the convulsions were due to a uremic condition rather than eclampsia.

Sixth, the permanent injuries to the eyes and kidneys and the inadvisability of *this patient* ever becoming pregnant again.

By J. H. Simons, M.D.

IV. *Posterior brow presentation.*—Report of a case necessitating extraperitoneal Cesarean section. A primipara in labor eighty hours, dry labor, head deflexed and not engaged, cervix dilated only two fingers. Postoperative wound infection with B. Coli. Satisfactory recovery. Baby died two and one-half weeks post-partum.

The case is that of I. A., single, aged 26, admitted to the Minneapolis General Hospital, January 3, 1928, and discharged, February 1, 1928.

Para 1. Grav. 1.

Patient had negative history throughout pregnancy; contractions were strong, regular every fifteen minutes; membranes unruptured; no bloody show. Breech in the fundus, back to left; small parts to right and mid-abdomen, head at pelvic brim, fixed but not engaged. Rectal examination—no dilatation, no effacement; head presentation confirmed; position O. D. P.

Staff examination of pelvis, January 4, 1928, at 11:15 A. M., 23.0—27.0—29.0—18.5. Bisischial—7 plus —Post. Sagittal—not measured. Head fixed, not engaged; prominence on right; head deeper on left. Impression: O. L. P.

Staff examination, January 5, 1928.

Cervix 50 per cent effaced. Os 1-2 cm. dilated, very acute angle to sacrum. Head fixed but not engaged. Ischial spines not prominent. Bisischial diameter ample. Abdominal examination same, O. L. P.

General observations: Extremities rather short. Hands broad and fingers short. No rachitis rosary felt. Frontal bosses not prominent.

Position O. L. P. Membranes now ruptured. Cervix only 1-2 cm. dilated and 50 per cent effaced—contraction. Ring (slight) developing. Patient has now been in labor eighty-two hours with several periods of rest with morphine.

Procedure: Advise low cervical extraperitoneal Cesarean section.

Operation: January 5, 1928—Low cervical, extraperitoneal Cesarean section.

Pre-operative course: Eighty-two hours in labor, membranes ruptured. Temperature 99.6° at time of operation.

Diagnosis at operation: O. L. P. with deflexed head. Contracted pelvis.

Post-operative course: Very mild febrile reaction. In hospital twenty-five days post-operative. Wound infection due to B. Coli. Healed well after infection cleaned up.

Baby: Developed pharyngitis second day postpartum. Temperature up to 104° for three days. Developed cellulitis of neck fifth day. Abscesses of neck opened eighth day and much pus liberated. Transferred to Pediatrics Department.

Multiple abscesses of scalp, back, and neck developed. Culture: Hemolytic streptococcus and staphylococcus aureus. Death on fourteenth day post-partum due to pyemia with multiple abscess formation.

This patient had a justo minor pelvis with a normal-sized baby in an occiput posterior position. She was given an ample test of labor, of course with periods of rest, and at last examination began to show signs of exhaustion. A contraction ring developed with some dilatation of the lower uterine segment. Most of the amniotic fluid had been lost, the heart tones were good.

This became an impossible labor by her own forces. Dilation of cervix and version was not justified because of the disproportion, the development of a contraction ring and loss of the greater portion of amniotic fluid. High forceps following manual dilatation was not indicated because of the difficulty of application and disproportion. Perforation of head could be done successfully with loss of child and considerable danger to the mother.

Potentially infected from long rupture of membranes, classical Cesarean was not advisable, but low cervical extraperitoneal Cesarean offered the probability of the best results for mother and child.

GASTRIC AND DUODENAL ULCER: SURGICAL TREATMENT*

By Richard R. Cranmer, M.D., F.A.C.S.

MINNEAPOLIS, MINNESOTA

Although the subject of gastric and duodenal ulcer has been receiving an increased amount of attention in the medical societies and journals, it is not receiving more than it deserves, as it is plainly evident to physicians that the incidence of these conditions, especially duodenal ulcer, is increasing. The purpose of this paper is to discuss and review the surgical treatment, but it is interesting to note the research and the experimentation that is being carried on throughout the country in an attempt to prove the actual cause or causes of these conditions. Among a host of others, Mann, Durante, Rosenow, and Reeves have stated their theories. Reeves has shown that the blood vessels in the pyloric portion of the stomach and in the duodenum have an oblique course through the wall, which anatomical arrangement renders them susceptible to thrombosis, and because of the vigorous action of the muscles in this region the possibility of trauma to these small delicate vessels is great. Rosenow stresses his point of selectivity of different strains of bacteria showing that streptococci have a marked affinity for the mucous membrane in this area. Durante has demonstrated that a lesion of the nerve supply of the stomach may produce ulcers. Mann and Williamson conducted some very interesting experiments in which the alkaline secretions of the duodenum were diverted by various operations, tending to prove that the alkalinity of these secretions by neutralizing the acid gastric juice was the thing that prevented ulcers in the duodenum and when the alkalinity was insufficient to do that, as, for example, in hyperacidity of the gastric juice, ulcers were very prone to develop. Among the experiments was a series in which the duodenum was divided at the pyloric end of the stomach and was closed. The jejunum was severed some distance below its origin and the distal end of the severed jejunum was sutured to the pyloric end of the stomach and the upper end of the jejunum was united, end to side, to the ileum. In sixteen of the animals upon which this experiment was performed and which came to necropsy, fourteen showed ulcers of the subacute or chronic type similar to peptic ulcers in the human. These ulcers were usually in the jejunum a very short distance from the line of union of the jejunum to the stomach. Later, Mann found that if the end of the jejunum containing the ulcer was disconnected from the stomach and was sutured so as to form a blind pouch, and the stomach was again united to the duodenum, the peptic ulcer in the jejunum quickly healed. These experiments of Mann and Williamson are of great interest, not only in throwing some light on the etiology of ulcer that follows gastro-enterostomy, but also in indicating the tendency such ulcers have to heal after the irritating secretions are removed and the tissues containing the ulcer are given rest. The general conclusion which may be drawn from the work of these and many other experimenters on the etiology of peptic ulcer is that there are doubtless many factors that may be responsible. In some cases the ulcer may be due to only one of these factors, in others there may be a combination. Foci of infection doubtless play a very important part in the production of some ulcers, and, of course, where there is infection of the mouth, teeth, appendix, or gall-bladder it should be removed whenever possible.

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*Presented before the Hennepin County Medical Society, November 23, 1927.

Present-day surgical treatment of gastric and duodenal ulcer is based upon the physiology of the organs involved and upon the chemistry of their secretions, as well as upon their anatomy. Of course there still remains that great question of when to and when not to operate, but when once operation has been decided upon in a given case the procedures advisable have been somewhat narrowed down during the last few years.

Pre-operative preparation.—Pre-operative preparation is of maximum importance. In general all patients are given a soap-suds enema the evening before. If there is no pyloric obstruction a light supper is given the night before and water is given freely up to the time of operation. Gastric lavage is done one hour before the operation if there is a moderate degree of six-hour retention, and twice during the last twenty-four hours before operating if the stasis is complete or nearly so. Hypodermoclysis is given when indicated before operation, and blood transfusion is used just before operation if the patient's blood condition requires it as a result of recent hemorrhage. Infection in mouth, as pyorrhea, etc., should be given attention preceding operation. The patient is given a hypodermic of one-quarter of morphine without atropin if a local anesthetic is to be used. Atropin is added to the morphine if a general anesthetic is to be given. This hypodermic is given one-half hour before the operation.

Perforated ulcer.—The treatment of perforated ulcer of the stomach or duodenum is to close the perforation promptly and use as little trauma as possible to the surrounding tissues. The common point for perforation is the anterior surface of the duodenum. If the operation is done soon after the perforation the peritonitis is often merely chemical and the wound may be closed with a small cigarette drain to be removed at the end of forty-eight hours. If the perforation is of several hours standing, however, the peritonitis is usually bacterial, the prognosis is grave, and free drainage should be instituted. Frequently the perforation is minute, but there is a broad indurated base. If the ulcer is not too large and is near the pylorus a pyloroplasty, after the method of Horsley with the excision of the ulcer, is quickly performed and gives the advantage of not only excising the ulcer but of relieving the spasm at the pyloric end of the stomach and so promoting physiologic rest. Dr. Horsley's operation consists of extending an incision which is started in the duodenum through the pylorus and into the anterior wall of the stomach for a distance of an inch and a half. After the ulcer has been excised the remaining wound is closed by stitches that convert the longitudinal wound into a wound which runs transversely across the lumen of the bowel. If the ulcer has extensively infiltrated, and especially if there are numerous adhesions, it is better to attempt to approximate the infiltrated margins by gently suturing with chromic catgut, and after tying the sutures leaving the ends long and passing them through adjacent tags of fat, which may be obtained from the gastrohepatic omentum, the gastrocolic omentum, the round ligament of the liver, or the great omentum. If the perforating ulcer is in the stomach and there is no marked infiltration, treatment by cautery, according to the method of Balfour, is a satisfactory procedure. A small ulcer may be simply excised from the stomach, but extensive operations, such as pylorectomies or sleeve resections, should rarely be done after an acute perforation because a larger raw surface is left for absorbing the septic products that may have been caused by the perforation. It is necessary, in large infiltrating ulcers of the duodenum and pyloric portion of the stomach where those ulcers have been excised, to promote physiologic rest by diverting the current of food. This is done by posterior gastro-enterostomy. In perforating ulcers of the posterior wall of the stomach, access may be had by a transverse incision in the gastrohepatic omentum or in the gastrocolic omentum. After excising an ulcer or after having sutured it without excision a portion of the great omentum should be sutured over the wound not only as an additional protection against a leak but to prevent adhesion to the fixed tissues around the pancreas.

Peptic ulcers.—The treatment of peptic ulcer depends upon the duration of the ulcer, the size, its location, whether it is a gastric or duodenal ulcer, and upon the general condition of the patient. The operation required in any given case cannot be determined until after the abdomen has been opened. Any surgeon who applies blindly one particular operation to all peptic ulcers will secure bad results in many cases no matter how excellent is his technic. When there is a small callous ulcer in the duodenum or stomach without extensive surrounding inflammation the pathologic condition may be removed and at the same time the normal anatomical relations of the stomach and the normal gastric physiology restored. In other words, a pyloroplasty may be done. On the other hand when there is an extensive stenosis of the pylorus, when there are many adhesions or a large infiltrating ulcer of the duodenum exists, restoration to normal is impossible, for the tissues are permanently and extensively damaged. In such cases gastro-enterostomy, with or without closure of the pylorus by the kangaroo suture, as suggested by Horsley, gives good results. Horsley's argument in favor of the closure at the pylorus by means of an encircling suture of kangaroo tendon, when a gastro-enterostomy is done, is based upon the theory that it is the high acidity of the gastric juice which is the cause of jejunal ulcer. If the pylorus is thus closed the alkalinity of the duodenal contents is retained and protects the mucosa of the jejunum from the acid gastric juice at the stoma of the gastro-enterostomy. When the pylorus is open some of the gastric juice passes through the pylorus and lowers the alkalinity of the duodenal contents, thus lessening the protection of the what would otherwise be a normal alkaline duodenal secretion. It is the opinion of most surgeons that gastro-jejunal ulcers are caused by the acid gastric juice flowing over a mucous membrane which is accustomed to being bathed in an alkaline secretion. The percentage of cases of gastro-enterostomy developing a gastro-jejunal ulcer has been reported to be from two to ten per cent. Horsley reports that he has not seen gastro-jejunal ulcers develop where the pylorus was closed either permanently or temporarily by his kangaroo suture.

Lewisohn of New York, is probably the most radical surgeon in America in regard to the treatment of peptic ulcer. He advises partial gastrectomies, his idea being that the central point in peptic ulcers is the hyperacidity of the gastric juice, and that they are best treated from the physiological standpoint just as we treat an over-active thyroid by the partial excision of the gland. Partial or subtotal gastrectomy, he claims, reduces the area of acid manufacturing mucous surface of the stomach, thereby reducing the hyperacidity which he claims to be the cause of peptic ulcers. Dr. Lewisohn's stand in regard to partial gastric resections and pylorectomies is strongly backed by European surgeons and it is there a common procedure in the treatment of these conditions. However, American surgeons in general are not converted to this radical treatment of peptic ulcer especially if it is in the duodenum. If an ulcer is in the pyloric end of the stomach and particularly if it is large, a pylorectomy is often indicated. After a pylorectomy for this condition the stomach can be frequently reconstructed by a modification of the Billroth No. 1 operation. The objection to the original Billroth No. 1 operation, which was the attachment of the cut end of the duodenum to the lower part of the wound in the stomach, was that the thick wall of the stomach being sutured to the thinner wall of the duodenum would frequently dip in to the lumen of the bowel reducing its size. A second objection was that this union was made between the lower end of the stomach wound and the duodenum, and, since the stomach empties along the lesser curvature instead of along the greater curvature, food was directed against the blind end of the upper portion of the stomach wound and then had to change its course in order to find the exit into the duodenum. The modification of the Billroth No. 1 operation, which is being used extensively to-day, calls for the anastomosis between the duodenum and the upper end of the wound in the stomach, which allows the food to pass directly out into the bowel and not have its course deflected. In addition to this change the modification calls for a split for a distance of two inches along the anterior wall of the duodenum, which allows the bowel to flange out and cover more of the stomach opening. This results in a larger exit for the food. The Billroth No. 2 operation which is the closure of the cut end of the stomach and duodenum after the removal of the pylorus or part of the stomach followed by a posterior gastro-enterostomy is frequently the best operation in the surgical treatment of large ulcers in the pylorus and small end of the stomach. The Polya operation can be used here also. It consists of an anastomosis between the jejunum and the open end of the stomach after the cut end of the duodenum is closed. The loop of jejunum can pass posteriorly to the transverse colon or anteriorly as done by Balfour. Dr. Judd, of Rochester, has recently described an operation that he has devised for the treatment of small ulcers on the anterior surface of the duodenum near the pylorus. It consists of excising the ulcer and also the anterior one-half of the pyloric sphincter. Closure is then made by sutures introduced so that the stomach end of the wound is sutured to the duodenal end, thus converting a longitudinal wound into a wound which is at right angles to the long axis of the bowel. This operation enlarges the exit of the stomach and permanently removes the action of the sphincter muscle. He claims that some of the symptoms in peptic ulcers are caused by a spasm of the pylorus. He does not feel justified in performing this operation in all cases of duodenal ulcer so far, but has confined it to those in which hemorrhage is a predominate symptom. He states that gastro-enterostomy is often followed by a recurrence of bleeding and that better results are obtained in these cases where a partial duodenectomy is done.

The four types of pyloroplasty in common use are the Heineke-Mikulicz, which is a longitudinal incision closed transversely; the Judd operation, which is an elliptical incision about the ulcer and closed in a transverse manner (this is not the operation he has recently described as partial duodenectomy); the Horsley physiologic pyloroplasty, in which the sphincter is cut and the incision extended for one and one-half inches into the stomach and which is also closed in a transverse manner; and the Finney operation, which consists of mobilizing the duodenum, suturing it to the stomach for a distance along the greater curvature, and making a horse-shoe incision up the duodenum through the pylorus and down along the greater curvature of the stomach. All of these types of pyloroplasty are useful and are used extensively but they can be used only in a limited percentage of cases. This percentage includes those cases in which the ulcer is on the anterior wall of the duodenum and where there are no extensive adhesions and no thick extensive induration. One objection to pyloroplasty is that frequently ulcers of the duodenum are multiple instead of single, and it is often impossible to remove them and still have a serviceable lumen left regardless of the type of operation.

Gastro-enterostomy is indicated when there is extensive infiltration of tissues—or adhesions bending down the duodenum. It is also indicated in stenosis. Here it is preferable to pyloroplasty. It is also indicated following excision of perforating ulcer of stomach or duodenum and in excision of a large gastric ulcer in which a V-type incision is used and a large amount of the stomach wall necessarily sacrificed. This puts the stomach into physiologic rest and healing is improved.

Where an ulcer is inaccessible, as, for example, high up on the lesser curvature, gastro-enterostomy is also indicated. Partial gastrectomy is indicated in large gastric ulcers near the pylorus where considerable tissue must be removed in order to render the possibility of secondary malignancy less. It is well known that malignancy does develop in a certain unknown percentage of gastric ulcers.

Partial gastrectomy is indicated where a lesser operation has failed to produce results but should not be used as a primary procedure in the treatment of duodenal ulcer. It is the opinion of Dr. Balfour that the attempt to establish partial gastrectomy for primary duodenal ulcer is a step in the wrong direction; that progress will more likely result from simplification of the operation rather than from making it more complicated, particularly when undertaken for a lesion which does not become malignant and which is not in the stomach. In 35 per cent of the cases of gastric ulcer now being operated on at Rochester, partial gastrectomy is being used.

Although I realize it is impossible to go into the technic of the various operations I wish to say there is considerable discussion in regard to whether or not clamps should ever be used in these various operations. There has been a rather abrupt turning from the use of clamps. The argument in favor of no clamps is that sometimes the trauma to the mucous membrane of the jejunum has been thought to be a cause of the development of the jejunal ulcer. If clamps are not used blood vessels may be seen, clamped, and ligated before the anastomosis is made, thereby rendering the possibility of a post-operative hemorrhage less. Drainage is these cases is usually not necessary with the exception of perforating ulcers which are operated on several hours after perforation, in other words, if bacterial invasion of the peritoneum has started. The contents of the stomach and duodenum are usually relatively sterile, and, even though there has been a slight escape of contents during the operation, it is not necessary to drain.

Local anesthesia is ideal in gastro-enterostomy and in pyloroplasty where traction is not required to bring the duodenum up where it can be worked upon. After a local anesthesia the patient rarely vomits. This is ideal where the operation has been upon the stomach itself. Extensive resections can be done under local anesthesia after the splanchnic nerve supply of the stomach has been injected with 1 per cent novocain solution.

In my series of cases which I wish to report here I do not think that I have been less conservative than most men in advising operation. All the cases of duodenal ulcer which I report had had previous medical care, ranging over a period of six months to several years with the exception of the perforating variety, which of course were operated on as quickly as a diagnosis was made. In cases of perforation, repeated hemorrhage, and obstruction from scar, I believe surgery is always indicated. Of the series reported, only one had had a previous pyloroplasty. This case undoubtedly developed a second ulcer in the duodenum, and because of the adhesions in the neighborhood of the pylorus a posterior gastro-enterostomy was done without any attempt at excision of the ulcer. Only two of this series were cases of jejunal ulcer, one was multiple ulcers extending for a distance of eight inches from the gastro-enterostomy stoma. This patient had had an excision of the ulcer with gastro-enterostomy and developed multiple jejunal ulcers three years later. In this case I did a resection of about ten inches of bowel, disconnected the gastro-enterostomy and did an end-to-end anastomosis of the jejunum. The other case of jejunal ulcer developed two years after gastro-jejunostomy with excision of the ulcer in the duodenum. In this case I simply disconnected the gastro-enterostomy, excising the stoma ulcer. On inspecting the pylorus I found no evidence of an ulcer in the duodenum. The duodenum was free, and the pylorus admitted the end of my index finger. The most extensive ulcer of this series was a gastric ulcer that involved a full half of the mucous membrane of the stomach. It covered the entire lesser curvature and caused an adherence of the stomach to the under surface of the left lobe of the liver. At the time of the operation it was impossible to move the stomach down into view, and a gastro-enterostomy was done with much difficulty.

My series of ulcer cases operated on over a five-year period includes 45 cases. Twenty of these cases were operated on in my surgical services at the Minneapolis General Hospital, and the other 25 were in my private practice.

Of the total number 2 were jejunal ulcers, 7 were stomach ulcers, and 36 were duodenal ulcers. Of the total number, 17 were perforating ulcers, and the rest were of the subacute or chronic type. Seventeen were in women, 28 in men, the ages ranging from 22 to 63. Of the 20 cases operated on at the Minneapolis General Hospital, 10 were acute perforating ulcers. In 12 of the total number gastro-enterostomy was done, in 5 of which the ulcer was excised or cauterized in addition to the gastro-enterostomy. The Polya operation was done in 2, in both of which the ulcer was near the pylorus on the stomach side and in which a pylorectomy was necessary to remove the ulcer. A Horsley modification of the Billroth No. 1 operation was done in one case. A V-excision of a large ulcer of the lesser curvature of the stomach followed by a gastro-enterostomy was done on another.

Two cases were jejunal ulcer and were treated as has been described.

Some form of pyloroplasty was done in the remaining 27 cases, several of these being for acute perforating ulcers of the duodenum.

Five of the 45 cases died, four of these cases being acute perforating ulcers of several hours standing. The other death followed excision of ten inches of the jejunum in a case of multiple jejunal ulcer following a previous gastro-enterostomy. There was no mortality in the twenty-six cases operated on during the sub-acute or chronic stages.

CONCLUSIONS

1. The very least possible alteration from the natural anatomical arrangement should be made consistent with a large stomach outlet.

2. A pyloroplastic operation is always preferable if possible, a gastro-enterostomy being the second choice, and partial gastrectomy being reserved for cases where a lesser operation does not suffice. Where the ulcer is a gastric one partial gastrectomy is frequently the operation of choice. This is made so because of the malignant possibilities of gastric ulcer.

3. Partial gastrectomy in duodenal ulcer is

not justifiable as a primary procedure. The new Judd partial duodenectomy bids fair to become popular in selected cases where the duodenum can be mobilized.

4. Gastric ulcer is always surgical, while duodenal ulcer is always medical until that treatment proves inefficient or perforation, stenosis, or repeated hemorrhages develop or when economic conditions compel a more summary treatment.

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THE TREATMENT OF ACUTE EMPYEMA*

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In this paper I have considered the treatment of only the acute form of empyema. Proper treatment of the acute type is the best assurance against a chronic condition.

Previous to the World War the treatment of acute empyema gave the average surgeon little concern. Lilienthal says: "For years the primary treatment of empyema of the thorax has been neglected. The cut and dried methods of the past decades with an appalling mortality have gone on with practically no improvement because of the lack of investigating interest on the part of the surgeon." Moschowitz says: "Many surgeons labored under the delusion that their results in this condition were much better than they were."

Few statistical studies had been made up to the time of the World War. The few authentic statistical studies which had been tabulated up to this time revealed the inadequacy of the standard treatment.

Wilensky, working with Moschowitz, in 1914, tabulated statistically the results of 292 consecutive cases treated in Mt. Sinai Hospital during the preceding ten years. The mortality rate was 28 per cent. Peck and Cave studied 94 cases in the Roosevelt Hospital between the years 1915-1920. The mortality in this series was 19.1 per cent. Lilienthal and Ware, in 1916, studied 66 cases in Mt. Sinai Hospital. They recorded a mortality of 20.5 per cent. Eggers, at Camp Jackson, treated seventy cases before the great epidemic of 1917. The mortality rate was 27 per cent.

Cameron, of Guy's Hospital, reported a 70 per cent mortality in children during the first year, and a 50 per cent mortality during the second year. Of 59 cases with early rib resection, 39 died and 13 recovered. Holt reported 204 cases of empyema in children with a mortality of 74 during the first year and 59 per cent mortality during the second year.

Other figures up to this time agree essentially with the above mentioned. Considering the facts that these men and the hospitals in which they worked rank among the highest in this line of work, these figures indicate the inadequacy of the established method of treatment for acute empyema. Early open operation with resection of one or more ribs was the prevailing method of treatment up to this time.

In the uncomplicated pneumococcic type of empyema, the immediate results with this form of treatment were fair. It has been generally considered that practically all of the ordinary civil cases were of the pneumococcic type. Pleural exudates of 574 of these cases were examined in Mt. Sinai Hospital. One hundred and thirty-three of these contained streptococci. Others have been found on close examination to contain staphylococci or a mixture of all three organisms. The tubercle bacillus may be present and not be detected in the early stages. These facts would suggest that we must not too readily come to the conclusion that we are dealing with an uncomplicated type of pneumococcic empyema.

The prevalence of the streptococcic type of empyema during the World War is well known. It was in this type especially that the early open drainage with rib resection proved disastrous. The mortality rate during the early epidemic in the army cantonments was so appalling as to bring about the appointment of a special Empyema Commission by the United States Surgeon General. The commission was made up of thoracic surgeons of the medical corps of the United States Army. It took up its work at Camp Lee, West Virginia, of investigating and devising means for obtaining better results with empyema patients.

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The mortality rate at Camp Lee, under the standard treatment of early open operation, was 48 per cent. Replacing this method by early aspiration and later partially closed drainage and irrigations with Dakin's solution, the mortality in these cases was reduced to 4.3 per cent.

The preliminary report of this commission with these remarkable results aroused the interest of those treating empyema in other camps throughout the United States. Stone, of Fort Riley, Kansas, soon turned in a detailed report of three large series of cases. In the first series of 85 cases between October, 1917, and January, 1918, with early open drainage, his mortality was 61.2 per cent. In a second series of 96 cases between January, 1918, and August, 1918, treated according to the principles laid down by the Empyema Commission, the mortality rate was reduced to 15.6 per cent. In a third series of 94 cases, treated by the same method with added experience and skill, the mortality was reduced to 9.5 per cent.

One camp after another throughout the United States took up this line of treatment and reported favorable results. Camp Dodge at first reported a mortality of 64.8 per cent. Later the mortality was reduced to 5 per cent. Rodman saw 240 cases between September 15 and October 10, 1918. With early open operation the mortality rate was 45 per cent. Later with the closed method it was reduced to 10 per cent. He states that at first he was opposed to the use of Dakin's solution in the pleural cavity, but he became converted to its use during this time. Dederick, from Camp Pike, reported 147 cases with a mortality rate of 48 per cent with early open drainage. Later, with the closed method of Mozingo, he reported a mortality rate of 7 per cent. Sherill, from Camp Sher-

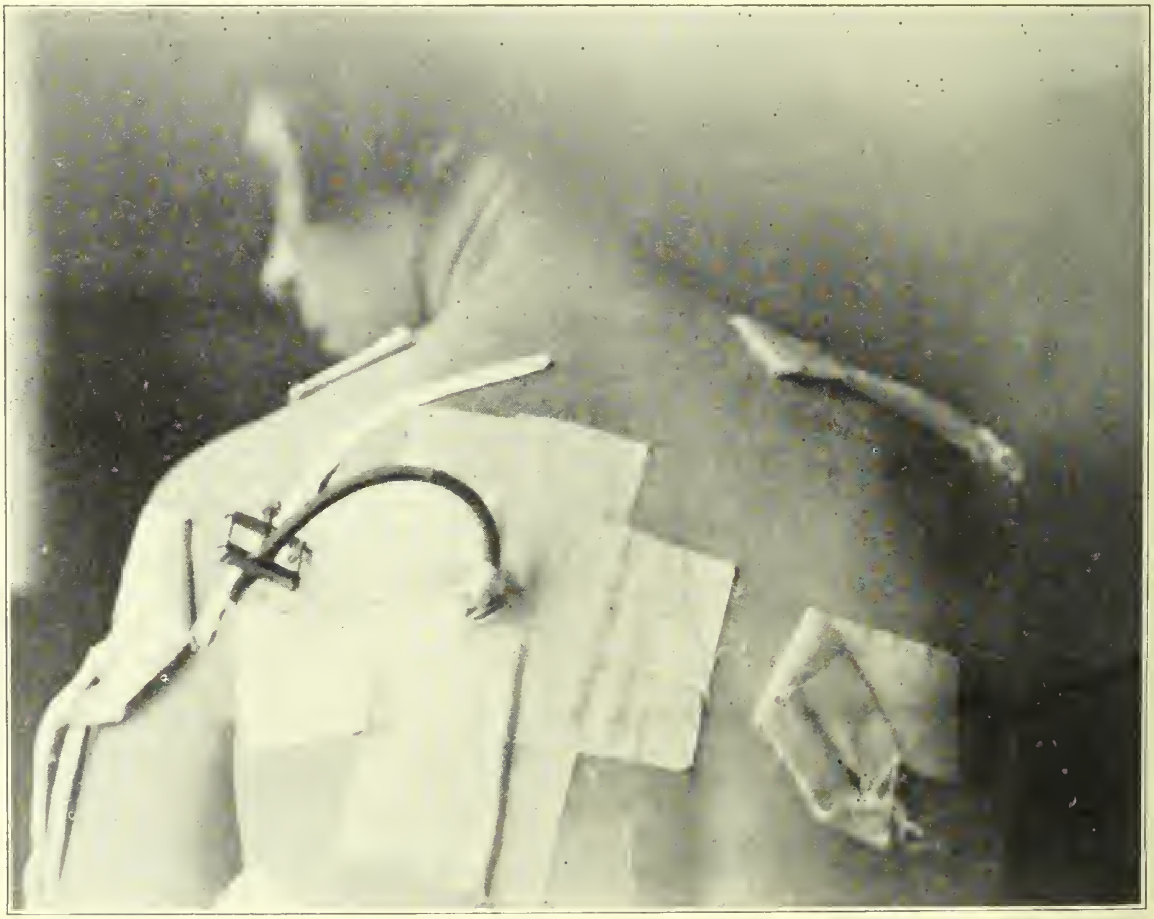

Fig. 1.—A simple method of instituting closed drainage.

man, reported a 50 per cent mortality with early open drainage. Later 17 cases were treated by the closed method with no mortality.

No doubt the virulence of the bacteria had considerably abated from the beginning of this epidemic. This accounted to some degree for the reduction of the mortality rate in these patients.

However, it is true that Camp Lee and other camps at which the closed method of drainage had been adopted were reporting a very low mortality, while in others where the early open operation was the method of choice, a very high mortality rate existed.

Many accurate statistics have been tabulated since the war which tend to show that the principles suggested by the Empyema Commission paved the way for a decided advancement in the treatment of acute empyema. Mozingo, of Walter Reed Hospital, who popularized what may be termed the actual closed method of drainage, reported 114 cases with 3 deaths. Manson, following the method of Mozingo, reported 43 cases with no deaths, no secondary operations, and no chronic conditions. Flint and Douglas, of the Yale Clinic, reported 102 cases with no deaths and no chronic cases. Whittemore, of the Massachusetts' General Hospital, reported 100 cases with 6 deaths. Most of these six cases had not been treated according to the recently established methods. He emphasizes early operation by the closed method under local anesthesia, and the intelligent use of Dakin's solution. Binnie, of the Boston City Hospital, between 1920 and 1924, reported 100 cases with a mortality of 13 per cent. These cases were not treated by any one man but rather promiscuously by various men, without regard for the principles laid down by the Empyema Commission.

As suggested by Heuer, of Johns Hopkins, complications and chronic conditions usually result from inadequate treatment of the acute condition. In the cases studied by him, the mortality rate was 50 per cent in complicated cases, while in uncomplicated cases it was 6.5 per cent. He states that early open drainage produces an inevitable pneumothorax, disturbs the mediastinal structure, lessens the vital capacity, and impedes the expansion of the lung.

Closed drainage properly carried out not only eliminates the above hazards to a large extent, but it is more comfortable to the patient and tends to prevent complications and chronic conditions.

For dissolving the plastic exudate which tends to hold the lung in collapse, and cleaning out the pleural cavity, nothing so far surpasses Dakin's solution irrigations. Moschowitz says: "The far-reaching observations at the War Demonstration Hospital of the Rockefeller Institute have taught us that empyema cavities can be rendered bacteriologically sterile by means of the Carell-Dakin treatment."

Here it was first shown that these cavities could be safely irrigated with Dakin's solution and could be made sterile by this means even to the point of closure without recurrence.

Stephens has shown that of 50 cases treated with simple drainage without Dakin's solution irrigations, there were 14 recurrences, or 25 per cent. While of 67 cases irrigated with Dakin's solution, there were only 8 recurrences, or 12.5 per cent. Graham says: "Dakin's solution not only sterilizes the pleural cavity, but its solvent action effects a decortication of the lung and thereby obliterates the empyema cavity."

Moschowitz, Graham, Liliental, and other prominent thoracic surgeons who have made an exhaustive study of this condition, believe that with prompt diagnosis, with early closed drainage and intelligent use of Dakin's solution irrigations, the mortality rate in empyema should be reduced to a minimum, and few chronic cases result. Such mutilating operations as the Shede, Estlander, and Delmormie would then be little called for.

Regardless of the type of empyema the early closed method is the safer. After the general condition of the patient has been improved and the size of the cavity reduced to a small capacity, little harm can come to the patient from open drainage. Occasionally the process will become stationary when the capacity of the cavity is down to two or three ounces. In such cases resection of the ribs over this cavity, allowing this portion of the chest wall to collapse, is the method of choice. Many methods have been suggested for instituting closed drainage and maintaining negative pressure, but usually the simplest is the best. Forced inspiration usually aids lung expansion. Blow bottles serve this purpose well.

As soon as empyema is recognized the exact location of the pus should be demonstrated by means of the *x*-ray. A needle, at least twenty-two gauge, is then inserted at the lowest point to confirm the presence of pus. A 22F catheter should be introduced at this point by means of the trocar and cannula method. If the empyema is at the base of the lung, the site of election for drainage is usually in the eighth intercostal space in the posterior axillary line. The greatest precaution should be taken in inserting the catheter to prevent the entrance of air into the pleural cavity.

Many methods have been devised for fastening the tube in place once we have it inserted. Four adhesive strips about 2½ by 6 inches serve the purpose well, two strips extending vertically and two horizontally, closing the opening tightly about the tube. A narrow strip of adhesive tape about the tube, through which a safety pin passes, holds the tube from slipping out of place. If the cavity contains more than a pint of pus it should not all be evacuated at the first session. Dakin's solution irrigations are given every two hours for the first four or five days or until the cavity shows a marked decrease in size and septic symptoms subside.

When the size of the cavity is reduced to two or three ounces there is no objection to doing a rib resection for open drainage or resection of all the ribs over the cavity, thus collapsing this part of the chest wall. However, when the situation is explained to the patient he usually chooses to continue the closed method, even if it may require a little more time.

The tube may be removed when no more bacteria can be found in the discharge and the cavity practically obliterated. The patient should be watched closely for several months and even years afterwards for possible reaccumulation of pus in the pleural cavity. I have three cases to present which fairly well illustrate the various types of empyema.

Case 1.—Baby B., aged two years. Pneumonia, December 19, 1925. Empyema began during the pneumonic process, but was not recognized early. Several aspirations were done as soon as the condition was recognized, and on December 25 closed drainage was instituted. The temperature was 105° when drainage was started. This was a streptococcic empyema such as prevailed during the World War. The child developed otitis media, suppurating glands of the neck, and ran a rather stormy course, but the cavity was finally made sterile and closed down on the tube. The tube was removed after a little over two months from the time of its insertion. The child has been watched closely since for recurrence, but there has been none so far.

Case 2.—Miss E., aged thirty-two years, unilateral pneumonia, April, 1926. After two weeks pneumonia subsided. A few days later an interlobar empyema was recognized on the left side. Closed drainage after the method of Mozingo was instituted. Irrigations with Dakin's solution every two hours for the first week. Patient developed bronchial fistula, and Dakin's solution irrigations were discontinued for a short time. After a few days the Dakin's solution irrigations were again used in spite of the fistula. The patient was placed in such a position that the cavity was the most dependent portion, and soon we learned the amount of Dakin's solution that could be used without giving the patient distress. After four or five weeks we suggested rib-resection to the patient, but she preferred to wait and take a chance at the cavity closing without resection. In a little over six weeks the cavity was sterile and almost obliterated. The tube was then removed and the patient watched closely since.

Case 3.—Mr. F., aged forty-nine years. Had pneumonia in 1916. Developed empyema following it. The accumulation of pus was so great that it practically collapsed his right lung. The condition was not recognized until he began to raise large amounts of pus. He hoped to clear up this condition by raising pus. This continued for nineteen months. He was then brought in on a stretcher, in 1918, and closed drainage was instituted. After the cavity was fairly well cleaned out and the patient's condition improved, a Delormie decortication of the lung was done. There was some expansion following this, but the lung did not come out to more than one-third its normal size. The cavity was again irrigated with Dakin's solution and in 1921 was allowed to close as a sterile cavity. In 1923 he developed toxic symptoms and examination revealed the presence of pus in this cavity. Closed drainage was instituted and Dakin's solution irrigations begun. The symptoms cleared up, and the patient returned to work and has been working continuously since. For the past two and a half years he continues to drain through a retention tube and changes the dressings himself. He does not feel that he can take the time for further treatment.

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UNDULANT FEVER IN SOUTH DAKOTA*

By A. L. Severeide, M.D.

PORTLAND, OREGON

Undulant, or Malta, fever has been known to exist in the United States for a long time. It was brought to this country during the Spanish-American war by troops who had been in Porto Rico.[1] In 1905 Craig[2] reported the first case known to have originated in the United States in a nurse who contracted the disease in Washington, D. C., presumably from nursing infected soldiers.

In 1911 Ferenbaugh[3] reported five cases of Malta fever in Texas. All five of the cases had worked with goats and had drunk raw goats milk. In 1922 Lake[4] reported the first outbreak of Malta fever in any city in the United States. This occurred in Phoenix, Arizona, and more than thirty cases were positively diagnosed, and many more were supposed to have occurred. These cases were all definitely linked to the goat-raising industry.

Raw-milk fever has been known to exist among the Mexican goat herds in the Southwestern United States for many years, and these people learned to protect themselves by drinking only boiled milk.

In 1918 Evans[5] pointed out the marked similarity between Br. melitensis and B. abortus of Bang, and it is due largely to Evans' work since that time that interest has been stimulated in investigating human infection with Br. melitensis abortus. In 1924 Keefer[6] reported the first case of human infection with Br. melitensis abortus occurring in the United States. In 1926 Gage and Gregory[7] reported the first case of human infection with Br. melitensis abortus in South Dakota. This case, a man, had contact with hogs only, over a period of five years, in the killing department of a packing plant.

Evans,[8] in February, 1927, reported twenty cases of undulant fever originating in the United States since Keefer first reported his case. These cases were scattered throughout the United States indicating the wide distribution of the disease.

Since Evans' paper, however, many other cases have been reported. The papers of Orr[9] and others read at the Cincinnati meeting of the American Public Health Association indicate that much interest has been aroused and that many new cases are being discovered. It is of interest to note that Orr and his associates were able to report in detail on sixteen cases of undulant fever occurring in a small area of a few counties in Michigan. Likewise, Hardy[10] and his associates in November, 1927, were able to report positive agglutination reactions for undulant fever in nineteen cases in the short period of four months in Iowa. It would seem safe to expect a similar increase in diagnoses in other communities, once interest in the condition has been properly aroused.

Contagious abortion in cattle is very prevalent in the United States. In New England it is estimated that 90 per cent of the herds are infected. In the middle West the percentage is variously estimated from 35 per cent to 50 per cent. It is at present impossible to get an accurate estimate of the prevalence of contagious abortion in South Dakota since, although the disease is reportable by law, actually very few cases have been reported.[11] Inquiry among dairymen in this community would lead us to believe that it is not as prevalent as it is farther east.

Clinically, undulant fever is characterized by fever of long duration, often wave-like, and with periods of freedom from fever lasting for several days or weeks, followed by a relapse which may or may not last as long as the first febrile period. This may be repeated several times. The average duration of the illness is three months but cases are known to have persisted from two to five years. There is usually intense headache, malaise, weakness and drenching sweats which usually occur in the morning. The joints are often swollen and painful. The spleen is usually enlarged. There is usually a leukopenia, and a severe secondary anemia usually develops during the course of the disease. Delirium is rare. In marked contrast to the mental condition of a typhoid patient, a person with undulant fever is usually keenly aware to all that is going on about him, even with a high fever persisting for weeks or months.

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*Presented before the Twelfth District Medical Society of South Dakota, at Waubay, S. D., January 16, 1928.

The symptoms of undulant fever due to infection with Br. melitensis abortus are indistinguishable from those due to Br. melitensis excepting that the former may be more mild. Undulant fever must be differentiated from typhoid fever, tuberculosis, sepsis, rheumatic fever, and kala-azar, and recently Evans has added to this list tularemia, chiefly because of the similar serum agglutination. From my experience with the case that I am about to report I believe that Hodgkin's disease and the malignant lymphomata will have to be considered in a differential diagnosis.

A positive diagnosis can be made by recovering the Br. melitensis abortus from the blood stream. A positive agglutination reaction of the blood serum in high dilution with suggestive clinical symptoms is considered sufficient ground for a diagnosis. The diagnosis would appear relatively simple if undulant fever only be considered. Diagnosis may be very difficult when undulant fever is superimposed upon a chronic condition, such as tuberculosis. Under such circumstances the symptoms due to infection with Br. melitensis abortus may be considered an exacerbation of the old illness. Any case with the clinical picture of typhoid fever which does not give a positive Widal reaction, and from which B. Typhosus cannot be recovered should be suspected of undulant fever. Certain State Boards of Health run the sera of such cases for undulant fever as a routine procedure.

Blood cultures in doubtful cases should be allowed to incubate from seventy-two to ninety-six hours before being considered negative, since the organism seems to grow rather slowly in ordinary media.

The prognosis is quite good. The mortality rate is less than 2 per cent. However, the long duration of the illness with the possibility of a relapse makes it a disease to be feared and avoided if possible.

The following case is reported:

J. D., male, aged 33, farmer, was admitted to the Peabody Hospital, September 20, 1927. His complaints at that time were:

1. Headache
2. Weakness
3. Dizziness
4. Loss of appetite
5. "Stomach trouble" (constipation)

He had had the above complaints for "about a month." He felt he had been distinctly worse during the past two weeks. He thought he had no fever. His headaches came on in the morning and persisted all day and were becoming disabling. He felt that his weakness was progressing. However, he was working every day but was becoming so weak he could scarcely keep going.

Physical examination:

A well-developed, poorly nourished young man who looked acutely ill. Temperature, 100.°

Head: Pupils react to light and accommodation; tonsils, large; teeth, in fair condition; thyroid, not enlarged.

Chest: Lungs, resonance good in both chests. Respiratory excursion, satisfactory. Breath sounds, normal. No râles after expiratory cough.

Heart: Regular, apex rate, 99; no murmurs. Sounds, not remarkable. Maximum apex impulse, 7.0 centimeters from the midsternum, 1 centimeter inside the midclavicular line.

Abdomen: No masses; no rigidity; spleen, easily felt on deep inspiration.

Extremities and reflexes, not remarkable.

Lymph glands: There were several palpable lymph glands in each axilla, the largest the size of a hickory nut, firm, and discrete. There were palpable pea-sized glands in each groin, also firm and discrete.

Rectal examination: Prostate not enlarged; otherwise not remarkable.

Blood pressure: 100/65.

Laboratory findings: Blood Wassermann negative. Hemoglobin, 72 per cent; R. B. C., 4,150,000; W. B. C., 4,700; Differential, 57 per cent polymorphs, 41 per cent small lymphocytes, 2 per cent large mononuclears. The red cells appeared normal. The urine: 1030 specific gravity; acid, no sugar or albumin; microscopic, negative.

A tentative diagnosis of typhoid fever of Hodgkin's disease was made and it seemed to me so much like Hodgkin's disease that a bioscopy was done on a gland from the left axilla and one from the groin. Both were found to be free of any sign of Hodgkin's disease or leukemia.

Blood cultures made on the 25th and 29th of September were examined after twenty-four hours incubation and were considered sterile. The Widal reaction was negative four different times over a period of about three weeks. On the 21st of October the serum was found to agglutinate cultures of Br. melitensis abortus in dilution 1:1240. On the 23d of October a blood culture which had been allowed to incubate ninety-six hours without being examined was found to contain a small gram-negative coccobacillus in pure culture. This organism was later indentified as the Br. melitensis abortus.

There are several features in the clinical picture which should be emphasized. The long duration of the febrile period (sixty-seven days after admission to the hospital), would aid in ruling out an uncomplicated typhoid fever. Another striking feature was the drenching sweats which were a daily occurrence for more than fifty days of his stay in the hospital. For more than thirty days of his stay in the hospital he complained daily of chilly sensations, at some period during the twenty-four hours; however, he did not at any time have a severe chill. Another noticeable thing was the entire absence of delirium, even with the temperature persisting at 104° rectally for several weeks. The leukopenia persisted throughout the entire illness.

At the present writing the patient is still with a normal temperature and is apparently well.

My experience with this case of undulant fever has left me with the firm conviction that I have seen the condition several times before and failed to recognize the true diagnosis.

CONCLUSIONS

1. Undulant fever due to Br. melitensis abortus is known to exist in South Dakota and is probably much more common than is at present supposed.
2. All cases which clinically resemble typhoid fever but without B. typhosus in the bloodstream and with a negative Widal reaction should be suspected of undulant fever.
3. Hodgkin's disease will have to be considered in the differential diagnosis of undulant fever.
4. Contagious abortion among cattle needs more attention in South Dakota than is given it at present.
5. Pasteurization of all milk would seem to be a necessity to insure protection at present.

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BOOK NOTICES

The Surgical Clinics of North America. (Issued serially, one number every other month.) Volume VI, number VI (New Jersey Number—December 1926.) 318 pages; 93 illustrations and complete Index to Volume VI. Per Clinic year (February, 1926 to December, 1926.) Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company.

This volume of the "Surgical Clinics of North America" is known as the New Jersey number. It covers practically the entire field of general surgery with several case reports, and considerable space is devoted to the actual technic of surgery.

Surgical Clinics of North America. June, 1927, Chicago number.

This volume especially deals with surgery of the abdomen and the genito urinary tract.

Dr. Bevan reports brain tumor and two cases of head injury.

Dr. Carl B. Davis has a treatise on carcinoma of the lower bowel and traumatic intestinal injury.

Dr. Herbst reports some very instructive genito urinary cases.

Drs. E. M. Miller, Speed, and Eisendrath likewise report cases in special fields with clinical and laboratory research to substantiate their reports.

—E. A. Regnier, M.D.

This Business of Operations. By James Radley; Foreword by J. M. Withrow, M.D., Chief of Staff, Christ Hospital, Cincinnati. 96 pages. The Digest Publishing Company, Cincinnati, 1927.

This small book which can be read in an hour was written by a typical American business man and depicts his conversion from prejudice against doctors, hospitals, and all things pertaining to medicine, to an attitude of surprise and appreciation of the things for which these institutions and persons stand.

The story is told in colloquial English and in a light and popular vein. It concerns the omniscience and self-satisfaction of a successful business man who feels that he can control all factors of his own destiny. The writer makes a brave attempt to avoid medical attention, but when it is eventually forced upon him he finds to his surprise that other factors than business interest a certain proportion of the universe; that doctors, nurses, and hospitals are not such hostile institutions. after all.

The book is a penitential effort to "sell" to others afflicted with medicophobia his new-found knowledge, and, as such, it may occupy a unique place in a medical library. Its field is, by its nature, with a certain type of the laity. For anyone who has a few spare moments it makes interesting reading.

—Norman Johnson, M.D.

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SPEAKING OF OPERATIONS

Dr. Russell Boles, Associate Professor of Medicine in the University of Pennsylvania, while attending the American Medical Association meeting held recently, read a paper on "Chronic Appendicitis;" and he thinks the popularity of this very widespread operation is waning, and that only the acute cases of appendicitis are the ones that are surgical, while most of the so-called chronic appendiceal cases are due to some other conditions. He also believes that 97 per cent of those operated on for chronic appendicitis get no relief. Some get worse, and 3.8 per cent are fatal.

What in the world is going to happen when a man of Dr. Boles' reputation gets up and talks against chronic appendicitis? Some other man will be writing on the subject of the elimination of other surgical operations. It was boldly stated at the meeting held in Minneapolis in June that a celebrated internist in the East admitted that 98 per cent of his gastro-intestinal cases were purely nervous—not due to any gastro-intestinal pathology at all.

Dr. Boles believes that the so-called chronic appendicitis is almost always something else, often neuralgia; that he has found no combination of symptoms to justify a diagnosis of chronic appendicitis to be operated on. Apparently medicine is being revolutionized considerably, and if our popular operations are to be thrown into the discard it is possible that the surgeon will find it necessary to make a neurological examination before he operates on any patient—a very necessary thing, whatever the operation and whoever the patient.

Dr. J. G. Hinkle, of Bethany, Missouri, at the closing session of the Seventh Annual Congress of the Anesthetists, at the Curtis Hotel, in Minneapolis, said he had been experimenting for sixteen years and found that a combination of alcohol, ether, and chloroform, in which the alcohol after being nebulized becomes an anesthetic by inhalation and offsets the undesirable effects of ether and chloroform, was a desirable anesthetic for obstetric use.

MEDICAL CHARITIES

Dr. Jabez North Jackson, the noted surgeon of Kansas City, has emphasized for some time the futility of doing so much charity work—that we are altogether too generous with our time as medical men and surgeons in taking care of non-paying patients, and he thinks this practice has come to a point where some attention should be paid to it and the patient should be instructed in some of the common ethics of life. For instance, a great many people will go to the general hospitals in our larger cities; and many, too many, who go to the clinics, should be sent to physicians and made to pay a moderate fee. It is unfair, under the circumstances, to expect the physician or surgeon to donate his services to those who should pay and there are too many general hospitals and too many free clinics in the larger cities that ought to be regulated in some better way.

Dr. Jackson says the medical profession owes fair and competent service to the public, but the public also owes fair treatment to the physician; and he proposed that the Association establish a council to determine what constitutes proper medical charity. But why expect the average doctor to take this into consideration. He has been so accustomed to running at the call of everyone who needed his services that he forgets sometimes that he is wasting his energies and getting nothing out of it except, most likely, abuse. Of course there is no question about a free clinic for the deserving poor. That has already been in existence for a long time; but this is one of the abuses that the medical profession has suffered for years because it is invaded by people who are able to pay, and not enough scrutiny is exercised over the applicant. One might as well establish free groceries, free meat-markets, and things of that sort. But they would very soon become unfair and unjust in their operations and they would very soon run themselves into disuse,—not like the medical profession that has insisted upon doing so much charity work. But the time is coming when it must be better regulated than it is now.

When one stops to consider the past year's work by physicians and surgeons in combating disease one will readily understand the attitude taken by some of the more advanced medical men. What the political parties have or have not done in the past year dwindles to the proportion of small potatoes when compared to medicine's conquest of pernicious anemia. The latter is probably one of the most important curative achievements of the last year or of the last decade. Think of what has been done in gangrene and other disturbances of the circulatory system, which can be combated successfully by typhoid fever vaccine. And goiter in the Middle West has been treated with iodized salt with beneficial results, while the treatment of leprosy in the last seven years has resulted in the release of thirty-one patients completely cured. For this the medical profession is responsible, and yet we are called upon daily, frequently at night, to go and do more charity work.

DEBUNKING DIETETICS

The editor has just been reading a review of and later read the book called "Eat, Drink and Be Healthy," by Clarence W. Lieb, M.A., M.D., formerly associated with the Peter Bent Brigham Hospital in Boston, the New York Hospital, and the Post-Graduate Medical School and Hospital, New York City, and a member of the A.M.A. and other societies. It will probably be read with a good deal of pleasure by some doctors and will create a very decided feeling in others.

In the introduction by Dr. Crampton, of New York, he says "Man, who is one of the most interesting of animals, has usually been regarded as the most rational. Theoretically, at least, he differs from the so-called lower forms in showing an ability to manage his own life to a greater or less advantage. No observer will assert that he carries this practice too far; but he seems to display a dawning of intelligence, and it is conceivable that he will progress still further." The introducer also says that the rational conduct of eating is still in the stage of early dawn; "hereditary instinctive impulses direct our first babyhood breakfast. The response to smell, touch, and taste starts the child suckling at his mother's breast, and the sensation of a full stomach sleepily ends the meal. Smell, touch, and taste, with the aid of sight, continue to determine our choice of food through life. These senses control choice to such an extent that a man with no "brains" will probably eat the same amount as one who has "brains" (which is commonly the case). Of course, most of us think we choose our food with intelligence. We do not. Our prevailing attitude is 'I want what I want when I want it, I eat when I'm hungry and drink when I'm dry,' an attitude almost as mechanical as that of a sponge, and quite animal, if that is not slandering our cousins more or less removed."

The introducer evidently thinks that we don't care much about what we eat except the few of us who devote ourselves to eating. "The layman who does the eating (a most persistent and popular habit) sits down to his ham and eggs with a feeling of obstinate courage or, if he be of the kind that is sustained and soothed by an unfaltering trust in some food cult, orders calories, bran, and vitamins and rises from the board with a glow of righteous satisfaction. The easiest way to become a prophet of diet (or anything else) has always been to announce some extreme and novel theory which will satisfy all human desires. Nine-tenths of our information comes from people who have something to sell."

The introduction is followed by a preface which starts out with the statement that "Man is the only animal that does not instinctively know how to select his food. He is the only animal that eats without hunger and drinks without thirst." The author thinks, too, that "the world of eaters consists almost entirely of two classes: (a) those who have never learned what is good for them, and (b) those who have taken some trouble to learn the wrong things. The first class is suffering from a lack of facts. The second class is suffering from too much fad and fallacy."

The preface further states, "Stefansson has remarked in his book, "The Friendly Arctic," that there is no field of human thought, except possibly religion, in which sentiment and prejudice take the place of sound judgment and logical thinking so completely as in dietetics. While overeating is the cause of a large proportion of all human misery, the various diet fads are beginning to run it a close race. Omitting breakfast or luncheon is a growing habit that is to be discouraged. Sleeping immediately after lunch or dinner is unwise. A meat-free diet, except in certain diseased conditions, has its dangers. Eating yeast or bran regularly, except after examination and advice by your physician, may be a serious mistake."

The preface goes on to state that "climate, age, sex, habits and nutritional status are all variables which determine the kind, quality, and quantity of food required by an individual. . . . The patient who treats his own ill with his favorite pill or diet is in the same class as the lawyer who tries his own case—both have fools for clients."

This is followed by the chapter of contents, which is admirably arranged and takes in all sorts of things which relate to our philosophy of eating. Also, in part two, the choosing of one's diet, the author gives unfamiliar facts about familiar foods and vegetables. He strikes the faddist very hard in his chapter on "The Folly of Spinach." He also tells of a good many commonly ascertainable foods and why they are good or bad. The writer indulges himself in some liver recipes which probably will find favor with many. He also attacks the yeast food as a fad and says that because most of the people see it advertised in the press they finally believe that it is a cure for a variety of ills. But he advises the "yeaster" to consult his physician first, before he begins yeast. And he says frankly and flatly that although it contains vitamin B, he thinks that it gives up but little of its vitamins because it is a hardy organism and survives passage through the alimentary tract, hence yeast should be killed by boiling if its vitamin absorption is desired. It is also very high in purins and for this reason increases the uric acid in the body, and in certain pathological conditions it produces vomiting, diarrhea, and intestinal irritation.

The author has a good thing to say for water, the drinking of water, and advises plenty of it, —six to eight glasses a day. And he doesn't object to water being taken with the food. He briefly mentions "Sauerkraut juice—another fad with potentiality for harm—consists largely of lactic acid and salt." He agrees with a good many of our coming voters, that a little alcohol is often a good tonic and sometimes stimulates the juices of the body. The soda-fountain drinks are looked upon as rather uncertain, as they are usually too sweet. Neither does he object much to coffee or tea except that they are apt to be overdone. He says, further: "I cannot think of any meal at which mince pie is advisable." And he thinks all pie crust should be made of wheat flour and shortened with butter instead of lard, and that fresh fruit should be used. Someone has said that half of the digestive ills in the world are due to good cooks and the other half to bad cooks.

In one of his chapters, "You Cannot Trust Your Appetite," the author says "Experiments have shown that the lowly hog, when allowed a chance to select his food, will eat various things in approximately physiological proportion, but intelligent human beings cannot be so trusted. Our diets are the outgrowth not only of instinct, but also of custom, tastes, and food availability." And "No matter what your age or present condition of health, remember that you cannot trust your appetite."

The author evidently thinks the counting of your calories is more or less of a joke, and he refers to the case of Gluys Williams, who has drawn a hilarious cartoon, which has appeared in the *New Yorker*, showing the sad plight of a man who could not make his calory account balance and who was being assisted by all the waitresses and the other guests, each madly calculating with pencil and paper. He says it is the physician's duty to criticize the family dietary. He must, by precept and example, by radio broadcasting, lecturing, and writing, teach the indispensibility of leafy vegetables, raw fruit, and milk, as well as insist on an adequate amount of animal protein; they must off-set the unwise excesses advocated by the faddist and, above all, the indulgences urged by the treacherous human appetite.

DR. HANIBAL H. KIMBALL

The editor of The Journal-Lancet regrets to announce that Dr. H. H. Kimball, of Minneapolis, died, after two months illness, on the afternoon of Monday, July 9, 1928.

We recently referred to Dr. Kimball calling him "a good sport" and commented on the fact that he was busy, active, and practicing medicine at the age of 83. He lived for two years more, so he was 85 at the time of his death.

Being the seventh physician that came to Minneapolis he had a very large practice and a very large acquaintance. He knew many children in his former days and was their physician in his later years. It seems a long time, but Dr. Kimball had practiced medicine in Minneapolis since 1867, sixty-one years in practice. It has been remarked that he had a wonderful time practicing medicine. He did everything in minor surgery during the early days up to the care of the more serious forms of illness that occurred among his families.

Dr. Kimball was born in Carmel, Maine, on August 18, 1843. His father was John Kimball, a lawyer connected with public affairs in his state, and was state senator. His mother was Abigail Homans, a descendant of an old Spanish family.

Dr. Kimball received his early education in the public schools of Hermon, Maine, and Hampdon Academy in Maine. He graduated from the Lewiston Seminary, now Bates College. He studied, fortunately, under a preceptor, a thing rarely done nowadays, and this gave him a good groundwork for his later success.

He was contract surgeon under Dr. S. B. Morrison in the Union army at the time of the Civil War. When the war was over he went back and graduated with his class in 1866, and in 1867 he came to Minneapolis. He came by rail to Prairie du Chien, Wis., then up the Mississippi to St. Paul by boat, and from St. Paul he walked to Minneapolis.

In Minneapolis Dr. Kimball joined forces with Thomas Lowry, who afterwards became prominent in the street railway of the Twin Cities. Later J. M. Shaw, a prominent Minneapolis attorney, moved into the same office with Dr. Kimball and Mr. Lowry.

Dr. Kimball suffered the hardships of the country doctor. He went over all kinds of roads, and was called out at all hours of the day and night, but he did it and did it well.

Dr. Kimball has no immediate survivors.

He died following an attack of encephalitis.

ERRATA

In Dr. L. W. Carlson's paper in our issue of June 15, two errors were made in the signs expressing metabolic rates. On page 256, second column, next to last line "—65" should read +65; and on page 260, column one, line 13 "—37" should read +37.

As metabolic readings are always plus readings the mistake would be readily detected by the reader, as most typographical errors are, fortunately.

MEMORIALS

DR. WILLIAM GARDNER SMITH

Dr. Smith was born August 16, 1853, at Northfield, Maine. He attended San Jose Normal in 1879, receiving his M.D. degree from Columbia University in 1884. He married Nellie G. Williams in 1884 and located at Sturgis, Dakota Territory, in 1887, where he founded the Sturgis Hospital. Joined the Dakota Medical Society in 1897 and was active in the Society's work. Member of the South Dakota Railroad Commission from 1899 to 1910. In 1910 he retired to a homestead in Perkins County. Died May 5, 1928, at his ranch home south of Lodgepole, S. D., and interment was at Lodgepole. He is survived by his widow and an adopted son, Welcome G. Smith.

J. F. D. Cook, M.D.

DR. HUGH WILLIAMSON REYNOLDS

Dr. Reynolds died Saturday, June 30, 1928. The cause of death was pneumonia complicated by meningitis.

Dr. Reynolds graduated in 1914 from the University of Minnesota. He spent one year as interne in the Minneapolis General Hospital, and following that came to Hibbing, and has been associated with the writer since that time, except during the war, when he was in the service for about two years.

He is survived by his widow and two small children, a boy and a girl.

B. S. Adams, M.D.

NEWS ITEMS

Dr. Frank J. Abts has moved from Yankton, S. D., to Omaha, Neb.

Dr. Andrew Sinamark has moved from Minot, N. D., to Hibbing, Minn.

The Upper Mississippi Valley Medical Society meets at International Falls on July 21.

The Sandstone (Minn.) Hospital, with Dr. H. P. Dredge in charge, has been reopened.

Dr. L. W. Kruger has resumed practice at Mapleton, Minn., after many months of absence.

Dr. C. O. Robinson, who formerly lived in Bismarck, N. D., is now located at Atlantic, Iowa.

Dr. H. W. Reynolds, of Hibbing, died last month. Further notice of Dr. Reynolds appears on another page.

The U. S. Government has decided not to renew the lease of the old Asbury Hospital No. 68, at Minneapolis.

Dr. H. L. Artz has resumed his practice in Jackson, Minn., after a year's absence in Europe for postgraduate work.

Dr. Geo. A. Sarchet has sold his practice at New England, N. D., and will do postgraduate work in Europe until January.

Dr. P. A. Nestos, of the Minot Clinic, Minot, N. D., has moved to Bristol, Conn., where he will do surgical work exclusively.

Dr. Joseph Collins, the distinguished neurologist, of New York City, defends group practice in medicine in an article in *Harper's Magazine* for July.

Dr. J. J. Heimark has moved from Fargo, N. D., to Blue Earth, Minn. Dr. Heimark is a graduate of the Medical School of the U. of M., class of '20.

The Northern Minnesota Medical Association will hold its annual meeting at Fergus Falls on August 20 and 21. We shall publish the program in a later issue.

Dr. Donald M. Johnson, formerly of Jamestown, N. D., is now located in Seattle, Wash., with offices in the Medical and Dental Building. N. D., to Hibbing, Minn.

Dr. R. L. Christie, of Long Prairie, Minn., has remodeled a large residence building to be used for hospital purposes. It will be known as the Riverview Hospital.

Dr. H. B. Bailey, of Ceylon, Minn., accompanied by his family, has gone on a motor trip to Niagara Falls, Montreal, Quebec, New York City, St. Louis, and Chicago.

Dr. Lawrence Carlson and Miss Ethel L. Johnson, both of Minneapolis, were married last month. Dr. Carlson is a 1926 graduate of the Medical School of the University of Minnesota.

Dr. Arnold S. Anderson, of the Buena Vista Sanatorium of Wabasha, has become Executive Secretary of the Tuberculosis Department of Public Institutions of the State of Minnesota, St. Paul.

Dr. R. W. Allen, of Forman, N. D., has been named Democratic nominee for the State Senatorship of Sargent County, N. D., and has been endorsed by the Independent Voters' Association of the County.

Dr. H. A. Miller, of Waseca, Minn., has moved to Fairmont, Minn., and become associated with Dr. H. G. Blanchard, of Waseca, and Dr. H. G. Gardner, of Fairmont, where they will open a hospital.

Dr. R. J. Dittrich, of New Ulm, a graduate of the University of Minnesota Medical School, class of '22, will reopen the Holman Hospital at Pine River, Minn., which building is undergoing extensive repairs.

Dr. Edward J. Hagan, of Williston, N. D. died last month at the age of 57. Dr. Hagan was a graduate of the University of Toronto Medical School, class of '05, and had practiced in Williston over twenty years.

Dr. Ira Bishop, who practiced medicine fifty years at Mapleton, Minn., died last month at the age of 78. Dr. Bishop was a graduate of Rush, class of '76. After practicing a short time in Wisconsin he located in Minnesota.

Dr. Carl E. Nordberg, a recent graduate of the Medical School of the University of Minnesota, who completed his interne work at St. Luke's Hospital of Duluth, has taken up medical missionary work at Isamba, East Africa.

Dr. Thomas Mulligan, of Grand Forks, N. D., has been appointed by Governor Sorlie, of that State, a member of the State Board of Medical Examiners to fill the vacancy on the Board made by the resignation of Dr. H. H. Healy, of Grand Forks.

St. Luke's Hospital of Aberdeen, S. D., opened its new building to the public on Friday, June 29. It has 80 private rooms and 10 large wards. Many handsome and costly gifts in furnishings and equipment were received from private individuals, firms, and organizations.

Dr. Martin M. Grove, of Dell Rapids, S. D., died last month at the age of 49. Dr. Grove graduated from the University of Illinois College of Medicine, Chicago, in the class of '05, and began practice in South Dakota in the same year. He was chief surgeon of the Dell Rapids Hospital. Dr. Grove is survived by three brothers, one of whom is a dentist and two are physicians.

Dr. Oscar M. Lanstrum, of Helena, Mont., died last month at the age of 59. Dr. Lanstrum was a graduate of the University of Illinois College of Medicine, Chicago, class of '94, and had practiced in Helena for twenty-five years. Dr. Lanstrum was active in medical matters of the city and state, in Masonic circles, and in politics, being a member of the Republican National Committee.

At the annual meeting of the Sioux Valley Medical Association, held last month at Sioux Falls, S. D., the following officers were elected:

President, Dr. C. P. Dolan, Worthington, Minn.; vice-presidents, Dr. C. O. Wright, Luverne, Minn., and Dr. Goldie Zimmerman, Sioux Falls, S. D.; secretary, Dr. John H. Henkin (re-elected); treasurer, Dr. W. R. Brook, Sioux City, Iowa (re-elected); member of board of censors, Dr. H. R. Hummer, Canton, S. D.

The State Board of Medical Examiners of North Dakota have granted licenses to practice in the state to the following twelve physicians: John V. H. Neville, Buffalo; J. Antony Amlerich, Hankinson; Sidney D. Hancock, Crosby; Bjarne Houkum, Grand Forks; Leonard H. Fredricks, Bismarck; Carl M. Peterson, Duluth; Richard W. Vanhouten, Oakes; Paul Rowe, Russell Gates and Cecil J. Watson, Minot; Michael W. Lyons, Sentinel, and John Tergeson, Jamestown.

The second annual meeting of the South Dakota Hospital Association was held at Sioux Falls, S. D., June 18, The principal address was given by Dr. B. W. Caldwell, Executive Secretary of the American Hospital Association. Officers were elected for the current year as follows: President, Dr. Percy D. Peabody, Webster, S. D.; vice-president, Mother Raphael, of McKennan Hospital, Sioux Falls, S. D.; executive secretary, D. L. Braskam, of the Lincoln Hospital, Aberdeen, S. D. The place of the next annual meeting was not selected.

ANNOUNCEMENT OF THE FORTY-SEVENTH ANNUAL SESSION OF THE SOUTH DAKOTA STATE MEDICAL ASSOCIATION

The Forty-Seventh Annual Session of the South Dakota State Medical Association will be held at Hot Springs, S. D., August 7-8-9, 1928. Headquarters and Registration at Evans Hotel, and General Sessions at the Battle Mountain Sanitarium.

Committee on Entertainment

Col. E. R. Lindner, Chairman

Maj. A. L. Stubbs	Capt. J. C. Hynes
Capt. F. C. Fuller	Walter J. Beck, Pres. Com. Club

The Association will be the guest, jointly, of the Black Hills District Medical Society and the Battle Mountain Sanitarium, the Battle Mountain Sanitarium contributing the major part of the scientific program, and the Black Hills District Medical Society, responsible for the entertainment of the State Medical Association, Women's Auxiliary and invited guests.

The Women's Auxiliary will be entertained by the local Auxiliary Wednesday as outlined in their program.

Wednesday, August 8, at 6:00 P. M., the officers of Battle Mountain Sanitarium, will give a banquet in honor of invited guests, Auxiliary, and Association.

Wednesday, August 8, at 6:00 P. M., the officers public meeting will be held at the City Auditorium. The meeting will be addressed by local physicians, Hon. E. W. Martin, and Dr. Wm. C. Woodward, Secretary of the Bureau of Legal Medicine of the American Medical Association, Chicago.

Thursday morning, August 9, at 10:00 A. M., an auto caravan will be formed for a sight-seeing trip through the Hills. The party will have luncheon at the State Park Inn, then proceed by way of the Needles, Sylvan Lake and Hill City to Lead and Deadwood, stopping there for the night. The party is expected to remain over for the last day of the "Days of 76" where they will be the guests of the City of Deadwood.

House of Delegates and the Council

Tuesday, August 7, 1928

Evans Hotel, Hot Springs

2:00 P. M.—House of Delegates called to order by President S. M. Hohf, M.D., Yankton. Reports of officers and committees, new busines and appointment of Reference Committees.

6:00 P. M.—Dinner, Past Presidents and Officers of the State Association honoring our Past Presidents, Dr. R. T. Dott, Sioux Falls, Dean of Past Presidents.

8:00 P. M.—First Session of Council.

Wednesday, August 8, 1928

7:00 A. M.—Second Session House of Delegates Committees, reports, etc. Second Session of Council to be announced. Third Session of Delegates and Council to be announced.

All Officers, Councilors and Delegates are requested to be present at the first session, in order that the business to come before the Association may be given due consideration and dispatch.

S. M. Hohf, M.D., President
Frederick Treon, M.D., Chairman Council
J. F. D. Cook, M.D., Secretary-Treasurer

Scientific Program

Wednesday. August 8, 1928

Battle Mountain Sanitarium

8:30 A. M.—Call to order by President S. M. Hohf, M.D., Yankton. Announcements of Local Committee by Chairman A. G. Allen, M.D., Hot Springs.

9:00 A. M.—Symposium: Physical Therapy. By Battle Mountain Sanitarium Group Clinic and Paper by Lt. Albert L. Stubbs, Assistant Surgeon. Clinic and Paper by Lt. Charles M. Griswold, Assistant Surgeon.

11:00 A. M.—Physical Therapy Council of the A. M. A. By H. J. Holmquist, Executive Secretary of Council on Physical Therapy.

Noon

2:00 P. M.—President's Address. S. M. Hohf, M.D., Yankton.

2:30 P. M.—Symposium on Tuberculosis: Paper and Clinic, R. E. Woodworth, Superintendent of the State Tuberculosis Sanitarium. Paper and Clinic, Capt. Joseph C. Hynes, First Associate Surgeon, Battle Mountain Sanitarium.

4:30 P. M.—Paper, O. R. Wright, M.D., Huron.

6:00 P. M.—Banquet, Battle Mountain Sanitarium.

8:00 P. M.—General meeting at City Auditorium.
Addresses by local physicians.
Address by Hon. E. W. Martin.
Response by S. M. Hohf, M.D., President.
Address by Wm. C. Woodward, M.D., Secretary Bureau Legal Medicine, American Medical Association, Chicago.

Thursday, August 9, 1928

Battle Mountain Sanitarium

8:30 A. M.—Paper and Clinic: Diseases of the Eye. Harold Gifford, M.D., Omaha, Neb.

9:30 A. M.—Report of House of Delegates.
Installation of officers.
Announcement of time and place of Forty-eighth Annual Session.

10:00 A. M.—Formation of auto caravan for sightseeing trip through the Hills. The party will have a luncheon at the State Park Inn, then proceeding by way of the Needles, Sylvan Lake, and Hill City to Lead and Deadwood, stopping there for the night. The party is expected to remain over for the last day of the "Days of 76" where they will be the guests of the City of Deadwood.

The Black Hills District Medical Society are tendered the thanks of the State Medical Association for the efficient help to the officers in the preparation of this program.

To the Governor and Surgeon, Colonel E. R. Lindner, and Staff of Battle Mountain Sanitarium for their co-operation in making this Session possible.

S. M. Hohf, M.D., President
Frederick Treon, M.D., Chairman Council
J. F. D. Cook, M.D., Secretary-Treasurer

Location Wanted

By a general practitioner in a good town with a prosperous territory. Unopposed practice desired. Address 495, care of this office.

Physician Wanted

In an inland county-seat town; large unopposed territory; 200 population. Good opportunity. Address the Bison Commercial Club, Bison, South Dakota.

For Sale

A $9,000 cash practice in good town in Western North Dakota. Large territory; good collections. Working knowledge of German necessary. Good opportunity; no competition; can make money from start. Write immediately. Address 497, care of this office.

For Sale

Private well-equipped hospital with capacity of 25 beds. Northwestern Minnesota county-seat town of 5,000. No open hospital within thirty miles. Will sell all or part. Practice too great for one person. Price $15,000. $5,000 down, balance terms. Address 498, care of this office.

Nurse Wants Position

A competent nurse with several years of hospital management experience desires position of merit in doctor's office, clinic, or hospital. Address 490, care of this office.

Practice for Sale

Large general practice in good farming community in Central Minnesota. Population, 2,000. Practice has averaged $10,000 a year for the past five years. Complete equipment, including quartz light and diathermy. Reason for sale, am specializing. Address 488, care of this office.

Association Wanted

By a graduate of the U. of M. Medical School who took his internship of one year in the Minneapolis General Hospital and one year in surgery and gynecology in the Swedish Hospital. Can understand German and Swedish but speaks only English. Age 27. Address 494, care of this office.

Desirable Location and Office in North Minneapolis Open

An established dentist in North Minneapolis who has just moved into offices in a new modern building in a splendid location desires to have a physician in the adjoining offices. Opening is a fine one. Telephone Hyland 2945 or address 493, care of this office.

Association Wanted

A physician, thirty-two years of age and unmarried, desires association with a general practitioner or surgeon. Have had three years country practice. Prefer the Twin Cities or a city over 20,000. Licensed in Minnesota. Reason for change: tired of small town. Speak Danish and German. Address 500, care of this office.

Fine Location for Physician in Minneapolis for Rent

In a new up-to-date heated building under construction at corner of 40th and East Lake Street. A dentist has already taken lease in the building for five years. Also up-to-date living rooms on the same floor. Rent, moderate. Address Manville Mandel, 320 Lumber Exchange, Minneapolis, or Telephone At. 1885 or Hy. 0182.

Physician Wanted

In North Dakota town of 1,200. Established practice in prosperous community well advanced in diversified farming, situated on main transcontinental line. One competitor. Practice for sale by widow of physician recently deceased. Purchase of office equipment only requirement. Applicant should have good command of the German language. Address 499, care of this office.

Opening for Physician in South Dakota

A good town of 450 population has never been without a physician until now. Present physician is sick in hospital and may have to retire. Will rent his office and equipment for $25 a month. Town has a four-year accredited high school, three churches, and all lines of business. Mixed population. Detailed information will be given by Commercial Club or druggist. Address 501, care of this office.

THE
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SPANISH INFLUENZA, PNEUMONIA, AND TUBERCULOSIS*

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CHICAGO, ILLINOIS

SPANISH INFLUENZA

I do not know why I was asked to include influenza in this talk. It may be because I have lived through three major waves of it. Of the first of these three I have no recollection, except that of a child's. I remember that it was a very sickly period and that an epidemic of epizoötic in horses which followed it was ascribed by the common people to the same cause as that of the epidemic of humans. My recollection of the epizoötic in horses is much more vivid than my recollection of influenza among humans, partly because I lived then in pastoral surroundings where people were relatively few, and where horses and mules were relatively abundant.

I was a practicing physician during the epidemic of 1890-91, had the disease myself, and cared for many patients who had it. The epidemic of 1918 I had contact with only in the public health relations of the disease. I did not have it in 1918, nor in 1872-4, so far as I know. Nor did I care for patients in either of those epidemics. Nor did I have any public health functions in 1890-91.

About all that can be said about my personal and professional knowledge of influenza is that it gives me a certain amount of background for opinion on the nature of the disease. It is more likely it was included in the subject assigned because of the possibility that influenza has influenced the course of the endemic prevalence of pneumonia and particularly that of tuberculosis.

We know practically nothing about influenza. No phase of the bacterial part of the influenza question can be either proved or disproved. The same is almost as true of the clinical part of the question. Clinically, it is impossible to diagnose influenza from coryza, bronchitis and pneumonia of other origin except in a minority of cases. In the great majority of cases the diagnosis cannot be estimated and is purely speculative or assumptive. The distinguishing symptom of influenza is supposed to be a tendency to rather frank hemorrhage, particularly into the lungs. But this symptom is generally absent in an influenza, on the one hand, and it is sometimes prominent in other pneumonias.

In the first days of the epidemic of 1918 there were many frankly hemorrhagic cases of influenza in which the diagnosis was easily and definitely made. In the later stages of the epidemic the symptom was absent or, at least, was not an outstanding phenomenon. So much for the relation of the hemorrhagic phenomenon to influenza.

I have an idea that we will eventually find that pneumonia is a group of diseases caused by organisms which have in common the ability to produce in the lungs a hemorrhagic exudate, which then coagulates and which is not removed except by liquefaction. If this be true, the organism of influenza will be regarded as one of the pneumonia organisms, and the only accepted symptom of influenza would be accepted as being a symptom of other pneumonias, the only difference being one of degree.

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*Read before the annual banquet meeting of the Lymanhurst Medical Staff, Minneapolis, Minn., March 28, 1928.

Nor are the certain other clinical peculiarities of influenza fixed. The epidemic of 1890-91 showed a predilection for elderly people; that of 1918, for young adults. This latter epidemic had certain clinical peculiarities with relation to pregnancy which did not prevail in that of 1890-91. It was prone to attack young pregnant women, causing abortion, hemorrhage, and the death of mother, or child, or both.

The light thrown on influenza epidemicity by the clinician is uncertain and oftentimes unreliable.

The same criticism applies to the contribution which came from the epidemiologist. The views of the epidemiologist on the question of origin of pandemics of influenza tend in two directions. One is that the pandemics originate in some obscure part of the world, and come to America as epidemics, called Russian, Spanish, or what not, according to a supposed point of origin, or a supposed gateway of entrance. The other is that influenza is really the development of an epidemic constitution, let us say in America, which makes it possible for endemic coryza to develop into epidemic, or even pandemic, influenza.

The first of these is the older theory, and the one which finds broader acceptance. I should say it is the accepted theory of the section in Hirsch's "Handbook of Historic and Geographic Pathology," where the record of the disease for several centuries is found.

The second appears to be the perhaps unconsciously accepted theory of the laboratory epidemiologists, who have done most of the writing since 1918. It is the theory of Hamer, who gave the Chadwick lectures on "Epidemiology in the Last One Hundred Years" on February 16 and 23, 1928. Hamer quotes Daniel Webster (probably Noah) as saying: "Influenza is the crux of epidemiology." He (Hamer) holds that influenza is ever present in endemic form under the names coryza and others, but that it periodically becomes pandemic. Some of these pandemics Hamer pronounces to have been menaces to intellectual progress, having killed Shakespeare and Cromwell, and left their mark on Chopin, Sterne, Swift, Carlisle, and William James. But Hamer is speculating, just as those who claim that influenza invades from some foreign land at intervals of about thirty years, are speculating. One side is as much entitled to speculate as the other. Neither has the right to belittle the speculation of the other, because both are speculating. I offer this bit of evidence for what it is worth.

In Chicago the acute respiratory disease death rate, so far as we can judge by actual statistics, was on the increase prior to the influenza epidemic of 1872-74. The increase was most marked in the 80's. The peak was reached before 1890, and the curve had begun to bend downward slightly before the influenza wave of that year.

The downward trend was very noticeable by 1914 to 1916. The influenza wave of 1918 influenced this trend in that year and in 1920, but beyond that it seemed not to matter. In brief, the curve of fatal respiratory disease was not influenced by the influenza waves except for a year or more. There was nothing in these curves to indicate an evolution of coryza and pneumonia into influenza.

In so far as this evidence has weight it contradicts the conclusion of Hamer. The practical meaning of the difference between these two views, from the standpoint of the health officers, is to follow Hamer's advice of a "steady prosecution of a considered campaign all the time—year in and year out." If it invades periodically, health officers (while they should conduct a constant considered campaign against colds and pneumonia for their sakes) should, in addition, have on file a considered method of meeting influenza at about thirty year intervals based on the theory of invasion.

Another reason for coupling influenza with pneumonia and tuberculosis is that the pandemic of 1918 is said by some to have influenced the death rates of pneumonia and tuberculosis in some way. This will be discussed later.

PNEUMONIA

Table 1 shows the death rates from pneumonia (all forms), bronchitis, and influenza by years from 1870 to 1927 inclusive, in Chicago. Pneumonia (all forms), bronchitis, and influenza are joined in this table because, in our experience, the diagnosis between them is unsatisfactory.

We escape statistical error by considering them as one disease, or one disease group, for the purposes of this study.

In 1870-9, inclusive, the average yearly death rate from the group was 149.53 per 100,000 living. In 1880-89 it was 214.75. In 1890-99, 278.07; 1900-09, 256.73; 1911-19, 245.95 and 1920-27 inclusive, 134.1.

The increase in the prevalence of the pneumonia group, as shown by the death rate since the Civil War, is a matter of common information. By some this increase is attributed to the influenza epidemic of 1890-91. In Chicago the increase was in evidence many years before 1890.

In 1880-89 the death rate was 65 points higher than in 1870-79, an increase of over 43 per cent. In 1890-9 there was a rise of 63 points, or 30 per cent, but this includes four very high years (influenza) (1890, 306.8; 1891, 383.6; 1892, 317; 1893, 314.5).

In the next decade, 1900-9, there was a drop of 22 points, or 9 per cent. In the next, 1910-19, of 11 points, or 4 per cent. This decade includes 1918 with a combined rate of 557.4, composed of pneumonia, (all forms), 269.6; influenza, 268.4; and bronchitis, 19.4.

In 1920-27, inclusive, the rate was 134.1, or a drop of 112 points, or about 45.5 per cent. This fall is in spite of the influenza of 1920, with its high combined rate of 231.5, a supposed secondary influenza wave.

The drop in the combined rate began in the "90" decade of the last century. However, it was slight, almost trivial, until after the great influenza wave of 1918. It is suggestive that in the wake of that wave there came a fall in the combined all-pneumonia, bronchitis, and influenza rate, which surpasses the fall in the consumption rate in the same period. It is possible that during the great wave of 1918 something happened either to the organisms which cause pneumonia, or to the hosts who harbor these organisms in a state of peace; or to those hosts who react to them with disease. This something may be either the major or a minor factor in the change.

However, it is far from certain that the wave of influenza was responsible in any degree for the change. Certainly it cannot be proved.

The campaign of education against pneumonia began about thirty years ago. It is increasingly intensive. Certain health departments are working directly against the pneumonias, treating them as forms of contagion. With the exceptions of 1918 and the influenza years in the early '90's, 1903 had the highest rate. The maximum ten-year average was the nineties. The drop was slight, but apparent, in the first decade of the century. Omitting 1918, it was marked in 1910-19. In fact, had 1918 not confused us we would have seen a marked drop in that decade, so great a drop that we would have recognized that the fight against pneumonia was being won. As it is, we must go earlier than 1870 to find a year that was as free as 1927, and to a decade earlier than that decade to find an eight year record as low as that which ended in 1927.

It seems to be more logical to hold that with respect to the pneumonias we are about where we were with consumption somewhere about 1907. A campaign of education and propaganda has reduced the ten year average from 278.07 to 134.1, reduction of more than 50 per cent. We are just undertaking governmental procedures for the control of the disease group.

Three reasons for the fall in the combined pneumonia rate, particularly since 1918, have been offered. One is that the influenza wave, in some unknown way, modified the pneumonia germs or their hosts; in some way modified what is called the epidemic constitution. If so, we cannot prove it. Nothing is more intangible just now than the laws which regulate this something called the epidemic constitution.

The second is that the improvement is the result of measures of control such as those used, particularly in Chicago and Pittsburgh. Dr. Vaux told the American Public Health Association, in 1925, that these measures were responsible for the improvement noted in Pittsburgh.

Perhaps these control measures have been a major factor. However, my opinion is that the principal factor is propaganda, education, and elevation of standards of living—such indirect measures as caused the first great drop in the consumption death rate.

CONSUMPTION

From "The Rise and Fall of Disease in Illinois," Volume I, we learn that the consumption death rate of Chicago, when the record first became available, was 299. This was in 1853. The average for the eight years of the fifty decade was 294. Between that date and 1902 there was a gradual decrease in the rate until a low of 141.9 was reached in 1902. This improvement was the result of education, propaganda, better wages, higher standards of living, recognition of the nature of the disease, its seriousness, its contagiousness, and better care of the sick.

Between 1902 and 1907 there was a slight yearly increase in prevalence and seriousness of the disease, in spite of education, propaganda, and all else that went with it. In 1907 the then health commissioner of Chicago recognized that something must be done in addition to what was being done if the cut of 50 per cent (from 300 to 150) was to be duplicated. He decided to do three things: To require the registration of cases of consumptives; to push the pasteurization of milk; and to promote a municipal tuberculosis sanitarium (with a visiting nursing service for cases of consumption not in the sanitarium; and a series of tuberculosis centers). The addition of these features to the preëxisting program caused the consumption death rate to fall from 171.5 in 1907 to 67.4 in 1922, in which year low was reached.

It was noticed that the drop in pulmonary consumption over the country as a whole was very marked immediately after 1918. This was apparent in Chicago, as well as elsewhere. The first explanation given was that the 1918 influenza wave killed off a great many who would otherwise have died from consumption. It was supposed to have cleared the decks of consumptives and weaklings generally. But it was noticed that the marked drop did not come to an end in 1919 nor even in 1920. It lasted until 1922. Since the decline persisted, the first explanation offered could not be accepted, not at least as the whole explanation. The next explanation offered was that the wave of influenza in some way influenced the tubercle bacillus and other organisms active in consumption, or it influenced the host, or both. This is termed the epidemic constitution. No proof of this has been found except the statistical proof alluded to. The epidemic constitution explanation may explain the phenomenon in part.

My thought is that subsequent to 1918 there was an interest in and support of public health measures, and of the rules of personal hygiene, that did not previously prevail, and that this was the larger factor in the improvement noted. Education, propaganda, elevation of standards, change in customs and habits—all these classed as indirect influences—I regard as the largest factor in the great drop since 1918.

The facilities for taking care of the tuberculous in sanitaria and hospitals, in clinics, and in the home, have been improved. Antispitting laws are better observed. Milk is better pasteurized, and, possibly, influenza changed something I do not know, but, in my opinion, the largest factor in the gain has been elevation of standards of living, change in customs and habits—the causes grouped together as indirect causes.

Since 1922 there has been a slight increase in the death rate in pulmonary tuberculosis in Chicago, the figures being:

1923—69.6
1924—70.7
1925—74.
1926—73.
1927—70.5

The increase in tuberculosis other than pulmonary began a little later.

The maximum death rate under this head in Illinois seems to have been in 1870, when it was 105. In 1925 it was 9.1. Since then it has risen slightly.

The state campaign for the eradication of tuberculosis in dairy cows in Illinois, which had been under way for several years, was seriously menaced by an ill-considered ordinance passed by the City Council in the winter of 1925-26. This ordinance served to divert some milk from the liquid milk supply to butter, cheese, and ice cream and unregulated milk.

The fall in tuberculosis (other forms) was arrested. In fact there was a slight increase in 1926 and 1927. Chicago's fresh milk supply is now drawn from remote areas where control is difficult and expensive, and where many of the producers are new to the business and not trained liquid-milk producers. However, the state is continuing its ten-year program, inaugurated some years before 1925, uninterrupted by passing episodes; the tuberculin testing of dairy cows is progressing all over the country. I have no hesitancy in giving it as my opinion that tuberculosis (other forms) will again decline in Chicago.

The health commissioner of Chicago, as he studies his tuberculosis statistics, finds himself, as did the commissioner of 1907—with a tendency towards an increasing prevalence.

The question arises: What new procedures can be added in 1928, to those already in use, in the hope of further reducing tuberculosis? I have one to offer. It is the adoption of immunization.

The present procedure, that of Calmette, is merely the best work out of a series of procedures set up during the past thirty years. The laboratory experimentation was done during the twenty-year period, 1900 to 1920. The clinical experimentation on laboratory animals was commenced during the laboratory period and continued for about twenty years, and may be said to be still continuing. The clinical experimentation on larger animals was begun prior to 1920. The clinical experimentation on farm animals was also begun about 1920. The clinical experimentation on human beings has been in operation about eight years. The clinical experimentation on a community basis, with respect to cattle, has been in operation five or six years, and with respect to humans, about three years. They are now beginning the vaccination of older children and of adults by subcutaneous inoculation.

No one can claim for Calmette vaccination that it has been proved. On the other hand, no one has found against it. The only reports that can be considered adverse are those which caution us not to be precipitate, and the Petroff report, which indicated that the attenuated bacilli might resume their virulence. A Swedish authority disputes Calmette's evidence.

It is well to recall a sentence from a letter written by Dr. O. W. Holmes to Dr. William Osler with respect to the contagiousness of childbed fever: "I am pleased to remember that I took my ground on the existing evidence before the little army of microbes was marched up to support my contention."

About all we know about the prevention and cure of tuberculosis is based on developing resistence or immunity. The more direct and specific this development of immunity is, the better, other things being equal. It is illogical to insist on indirect methods exclusively if any direct method is regarded as safe.

TABLE I

Chicago mortality rate from all pneumonias, acute bronchitis, and influenza, by years.

1870 to 1927

1870—143.5
1871—146.6
1872—174.6
1873—171.6
1874—135.
1875—172.5
1876—135.7
1877—122.5
1878—152.5
1879—140.8

1880—195,2
1881—210.9
1882—237.4
1883—194.3
1884—200.4
1885—196.1
1886—228.8
1887—231.8
1888—240.2
1889—212.4

1890—306.8
1891—383.6
1892—317.
1893—314.5
1894—210.5
1895—267.6
1896—232.8
1897—214.1
1898—241.
1899—292.8

1900—274.
1901—237.3
1902—256.4
1903—313.4
1904—267.8
1905—235.5
1906—244.8
1907—282.1
1908—220.9
1909—235.1

1910—255.2
1911—235.2
1912—222.
1913—216.8
1914—184.4
1915—181.9
1916—183.7
1917—216.3
1918—557.4
1919—206.6

1920—231.5
1921— 96.3
1922—121.9
1923—157.
1924—113.6
1925—120.6
1926—125.5
1927—134.1

DECADES

1870—149.53
1880—214.75
1890—278.07

1900—256.3
1910—245.95
1920-1927—107.34

TABLE II

Chicago all tuberculosis death rates by decades

1853-9—298.
1860-9—234.5
1870-9—228.
1880-9—198.7

1890-9—191
1900-9—181.8
1910-9—156.7
1920-7— 83.8

TABLE III

Chicago death rates from tuberculosis 1920 to 1927 inclusive

	1920	1921	1922	1923	1924	1925	1926	1927
Pulmonary	83.4	70.4	67.4	69.6	70.7	74.	73.	70.5
Other Forms	13.8	13.2	10.9	11.3	12.1	9.1	9.5	11.6

SECOND MONTHLY CLINICAL CONFERENCE AT THE MINNEAPOLIS GENERAL HOSPITAL

Department of Obstetrics and Gynecology

February 28, 1928

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MINNEAPOLIS, MINNESOTA

By C. M. Carlaw, M.D.

I. *Salpingitis*: The expectant and operative type of treatment. Report of an unusual case of salpingitis isthmica nodosa with operation.

Case 1 is that of B. M., aged 27, married, who entered the hospital February 10, 1928, complaining of vaginal bleeding of eleven weeks duration and of pain in both lower quadrants of the abdomen for six weeks.

F. H.: Essentially negative.

P. H.: It is significant that her menstrual history was normal with a 3-4 day flow up to four years ago, when she began to menstruate irregularly, associated with menorrhagia and pain in both lower quadrants. On one occasion, two years ago, patient flowed for 6 weeks with an accompanying pain in both lower quadrants. Patient has been married four years with no pregnancies, contraceptive measures not being used.

P. I.: Began about eleven weeks ago with a continued daily vaginal bleeding, which the patient believes was at the beginning of a regular menstrual period. The amount of bleeding varied from slight spotting to a profuse flow. Menses previous to onset of present illness ,were normal. About six weeks before admission to the hospital, the patient developed a continuous dull pain in both lower quadrants associated with a few slight chills. There was also a slight fever, never over 100° and urinary frequency $\frac{\text{D-15-20.}}{\text{N- 5- 6}}$

Physical findings were tenderness and slight rigidity in both lower abdominal quadrants. Pelvic examination showed external genitals normal with a multiparous outlet. There was a sanguinous vaginal discharge with blood clots. The cervix was small and normal in size and position. The corpus was normal in size and position but was tender on palpation. Both tubes were enlarged and tender, the left tube being about 2 cm. in diameter and palpable mainly near the uterine cornu. The findings in the right tube were somewhat similar but not as marked.

Laboratory data on admission showed urine essentially negative. Hgb., 90; R. B. C., 4,470,000; W. B. C., 11,400; P. M. Ns., 74; Lymphocytes, 26. Coagulation time, three minutes; bleeding time, five minutes; sedimentation time, 1 hour and thirty-five minutes. Urethral and vaginal smears, negative. Wassermann, negative.

Course in hospital previous to the operation was uneventful, and the patient was operated on on February 15, 1928, with a pre-operative diagnosis of chronic bilateral salpingo-oöphoritis. Operation revealed a chronic interstitial salpingitis of the uterine end of both tubes, the middle and distal portions being normal. The left ovary was about three times normal size and contained a hemorrhagic cyst. A bilateral salpingectomy, prophylactic appendectomy, and resection of the left ovary were performed.

Convalescence was normal except for a variable temperature from 99°-103° along with urinary frequency. A catheterized specimen showed 40-75 pus cells per high power field, (centrifuged) in an acid urine.

Pathological section of both tubes showed a chronic salpingitis with marked fibrosis and round cell infiltration of the walls of the tube with almost complete obliteration of the lumen of the tube in the uterine portions. There was no evidence of tuberculosis. The process was non-suppurative.

This represents a type of infection of the tube, usually of gonorrheal origin, known as "salpingitis isthmica nodosa."

The total number of laparotomies for all purposes in the Gynecological Division of the Minneapolis General Hospital during 1926-7 was 337. Of these 212 were salpingectomies, which gives a percentage of 63.5.

Salpingitis is a general term applied to all inflammatory affections of the Fallopian tubes. They are all due to infections.

When, in the course of the disease, the tubes become closed and contain pent-up fluid, if this fluid content is clear serum, the term hydrosalpinx is applied; if pus, pyosalpinx; and if blood, hematosalpinx. This latter, however, may or may not be of an infective character and therefore does not properly belong to the inflammatory diseases of the tubes. If during the course of a salpingitis the ovaries become involved in the inflammation, the term salpingo-oöphoritis is then applied.

The gonococcus, streptococcus, staphylococcus, and tubercle bacilli are the most frequent offending bacteria. The gonococci are no doubt the most frequent, accounting for from 60 per cent to 88 per cent in different hospitals.

In Glasgow, according to Monro-Kerr, the pyogenic infections rank first and are responsible for from 60 to 70 per cent of the cases, the gonococcus being only accountable for 20 per cent.

The tubercle bacillus is said to be accountable for from 7 to 10 per cent of the cases.

In cases following parturition, the point of entry of the infection is usually through a torn cervix. The streptococcic infections spread by way of the lymphatics and cellular tissues of the pelvis. These infections are of much longer duration than the gonococcus infections. The pus is particularly virulent. The cocci have been found to be living and active two and three years after infection. These infections of the tubes are always secondary to endometritis, pelvic cellulitis or peritonitis.

The gonococcic infections always travel by way of the mucous membrane and never by the lymphatics or the circulation. The chief lodging places of the gonococci in the genito-urinary organs are the glands about the vulva and urethra, Bartholin and Skene's glands, the cervix, and the fallopian tubes. The corpus uteri usually remains normal. The periodic regeneration of the endometrium is probably the cause of this condition.

Gonococci in the fallopian tubes are in themselves rather short lived as they are in time killed by the products of their own metabolism. Therefore the pus in a gonorrheal pyosalpinx, unlike the other infection, will become sterile in a short time.

Treatment.—In acute cases expectant treatment only is applied as a routine. The patient is confined in bed with the head of the bed elevated (semi-Fowler position). An ice bag is placed on the lower abdomen. Anodynes are given for pain after we feel sure we can eliminate acute appendicitis in the diagnosis. Hot saline or other douches are given. No cathartics are used. Some enemata are given when necessary; fluids are forced; and liquid diet is used. Diathermy is reputed to be of considerable value, but we have had no experience with it in the clinic here. The use of foreign proteins, such as milk or blood serum, has not proved very satisfactory.

The gonorrheal forms of salpingitis are self-limited in their course. In most cases, more or less complete recovery will take place after expectant treatment. Proper attention should be given to clearing up the primary infection in the lower genital tract; and should evidence of subsequent reinfection occur, indications for operation may arise.

Social position may influence our decision somewhat but never to the point of operating in the acute stage of salpingitis. We rarely operate in the first attack except for drainage. It is our rule not to operate for radical cure until the patient's temperature has been normal from seven to ten days, and the leucocyte count has remained under 12,000. The absence of pelvic tenderness and reaction following the examination are points of value in determining the activity of the inflammation.

We have been making use of the sedimentation time but have not yet reached a decision regarding its diagnostic value. In some clinics they do not operate on these inflammatory cases unless the sedimentation time is an hour or longer.

CONSERVATISM

Conservative surgery on chronic pus tubes has not been very satisfactory, in fact the end-results are often disastrous. In chronic gonorrheal infection of one tube only, it is considered better surgery to remove both tubes because the infection will almost surely follow sooner or later in this tube, which will often necessitate a second operation. This point, however, should be clearly explained to the patient, and she be allowed to decide whether she wants to take the chance or not. If she is married and anxious for children, she will probably decide against such a procedure and possibly justly so. In just such a tube, extra-uterine pregnancy may take place with its disastrous results. We had in this hospital a few nights ago just such a case. This patient had her right tube removed some two years ago, but her left one was allowed to remain. She became pregnant in this tube, which ruptured at the horn and she died on the operating table. If the infection is from pyogenic organisms the rule is to leave the sound tube because in these cases there is very much less likelihood of the other tube becoming involved.

There is probably no other field in surgery where good judgment has freer play with the results so gratifying as in the treatment of these cases. It must be admitted, however, that only a very small proportion of them allow of conservative surgery. One can offer some encouragement in cases of hydrosalpinx, but in cases of pyosalpinx conservative operations are as a rule quite unsuitable.

Conservative treatment of the ovaries, however, is most essential. It is a rare case where at least a portion of an ovary cannot be saved and this conservation is most important to the health and happiness of any patient before the menopause.

DRAINAGE

The advisability of drainage in these cases is often very difficult to decide. The old slogan, "When in doubt drain," is probably still good advice, but the drainage should be for a short time only. In gonorrheal cases any pus that may be present is usually sterile and need not be feared. In the streptococcic infections, however, any pus found cannot be considered sterile, and these cases should be drained, usually through the vaginal vault.

Adhesion, which are in some cases very numerous and dense, present a case for the personal equation. There is no particular description you can give of how to manage these problems. Experience here is the only teacher. In some cases on opening the abdomen one can see nothing but a formless mass occupying the whole pelvis and covered over smoothly with peritoneum. In others the ovaries, tubes, bladder, sigmoid, small intestines, appendix and omentum are all matted together presenting an apparently hopeless task. But somewhere in these cases there will be found a line of cleavage and by carefully following this line in first one and then another direction, always with the palm of the dissecting fingers toward the mass to be enucleated, you will be rewarded if you have patience with the necessary dissection. Hurry, roughness, and force will almost certainly result in failure and possible disaster.

In removing the tubes after they are loosened from their beds of adhesions, we clamp the messentery and dissect out the isthmal portion of the tube from the fundus of the uterus. We think this part of the procedure most important because if not done when the isthmal portion of the tube is involved, the case will not be cured, and, if it is not involved at the time of operation, it may become the seat of infection at some future date.

For sewing up the uterine cornua we use No. 1 plain cat gut sutures doubled, using a continuous overlock stitch, starting from the uterine end. When we have sutured along two-thirds of the way out, we tie the two ends of this suture together, thus gathering all the tissue sutured and anchoring it to the side of the uterus. Then with another double suture passed first through the side of the uterus below and behind the horn, we whipstitch the remainder of the stump of the Fallopian tube and when completed bring this distal end of the suture over to end in the uterus and tie. By tying these two ends together we have formed a pocket bounded on the inner side by the body of the uterus and on the outer side by folded up broad ligament. Into this pocket the ovary can be placed where it will be protected from injury and contact with any loops of intestines. The raw surfaces of the field of operation are then covered with the peritoneum of the round ligaments and the abdomen closed in the usual way.

By R. M. Pederson, M.D.

II. *Fibromyomata uteri*: Report of a case before operation with the problem of combating a severe secondary anemia. *X*-ray plates showing outlines of uterus by lipiodol injection were presented.

The case is that of B. D., colored, aged 43, housewife, married eighteen years. Admitted to M. G. H., February 21, 1928, from the Dispensary.

P. C.: 1. Menorrhagia and metrorrhagia for six months. 2. Pain in lumbar region during menstrual periods six to eight months. 3. Vaginal discharge preceding and following menstruation six to eight months. 4. Weakness and malaise two to three months. 5. Constipation fifteen or eighteen years. 6. Severe headache, frontal or left parietal region, during menstrual period six to eight months. 7. Vertigo and nausea several times a week before admission.

P. H.: No illness. No operation or injuries

C. T. A.: Established at twelve, twenty-eight day type—four to five days duration. No pain or discomfort until P. I., six months, increased amount, and duration; headache; backache.

Married eighteen years; pregnant first year; one normal full-term infant. No miscarriages. Venereal disease denied. Never had vaginal discharge until P. I. Has always had "gas on stomach," promptly relieved by taking soda. Constipation for fifteen or eighteen years; laxatives daily.

F. H.: Negative or unknown.

P. I.: About six months ago patient first had severe pain in lumbar region. and severe headache at menstrual periods. Duration of flow was six or eight days, instead of usual four or five days; flow was more profuse than ever before; becomes dyspneic on exertion and for two or three months has felt weak and occasionally dizzy and nauseated. Has had grayish-white vaginal discharge for a few days preceding and following menstrual period. Has been up and about; walked into the hospital.

Phys. Ex.: Mucous membranes extremely pale. Pupils react sluggishly to light and accommodation. Heart: Blowing systolic murmur at base, transmitted to neck vessels. Blood pressure, 110/66. Abdomen slightly distended, slightly tender, difficult to palpate because patient does not relax. Temperature, normal. Pulse, 70 to 110.

Bimanual: External genitalia negative. Apparent anemia of mucous membranes. Perineum competent, 1° tear. Urethra and Bartholinian glands negative. Cervix points downward and backward, to left of midline; bilateral 1° tear. Corpus enlarged and irregular, anterior position and slightly to left; is hard and firm. Surrounding the corpus, posteriorly and to the right, are irregular masses of varying size and consistency. On the right side is a mass twice the size of the corpus, somewhat tender and elastic. Uterus is considerably enlarged to the left.

Laboratory data: Urine negative; smears negative. Blood, February 23, 1928: Hgb., 18; R. B. C., 2,080,000; W. B. C., 12,600; P. M. N., 73, Lymph, 25. February 25, 1928: Hgb., 20; R. B. C., 2,260,000; W. B. C.. 13,000.

Morphology: Marked hypochromasia; occasional normoblast; moderate polychromasia.

Course in hospital: Is having absolute bed rest; diet as prescribed for pernicious anemia patients—2,500 cal.; prot., 135 gm.; foods with high cholesterol content. Blaud's (modified) pills. Symptomatic treatment. Has no complaints. Felt nauseated for few hours after lipiodol injection, has slight pelvic pain; otherwise has been comfortable.

X-ray report of lipiodol injection: Preliminary plate was made of the pelvis, and plates were made following the injection of lipiodol into the uterine cavity. This shows marked enlargement of the uterine cavity with a large, somewhat irregular ovoid defect encroaching upon the lumen of the cavity from the right. The appearance is that of a submucous fibromyoma which appears to be about the size of a fairly large orange. The tubes were not demonstrated on any of the plates. Plates made at twenty-four hours following the injection show no evidence of lipiodol in the peritoneal cavity.

Impression: 1. Fibromyoma of the uterus. 2. Occluded fallopian tubes.

Subsequent course: She was operated on on March 15, 1928, when a supravaginal hysterectomy for multiple fibromyomata uteri was done under gas-ether anesthesia. This patient's hemoglobin rose from 18 per cent on admission to 55 per cent in less than seventeen days on a diet of liver with iron, arsenic, chlorophyl, and sunlight. A median incision was made, and the uterus was found in 2° retroversion, adherent to intestines and omentum; adhesions freed, the body of uterus grasped with large forceps and brought up into wound; round ligaments cut allowing uterus to be delivered more completely; bladder dissected off down to utero-vaginal junction; both broad ligaments clamped and cut; body of uterus severed from cervix; cervical canal closed with suture; both broad ligaments tied off in sections being careful not to include too much tissue near cervix for fear of injuring ureters. The stumps of both broad and round ligaments were brought down and sewed firmly to cervical stump with chromic catgut. Abdomen was closed in layers; no drainage. Convalescence uneventful. This is her twelfth day post-operative and her hemoglobin now is 65 per cent.

Pathological findings: Specimen weighed 410 grams. It consisted of one subserous fibromyoma 4 cm. in diameter and one submucous leiomyoma 6 cm. in diameter. The submucous fibroid filled the greater portion of the endometrial cavity.

Treatment with liver, anemia diet, iron, and arsenic was continued.

Blood findings	Hgb.	R. B. C.
February 23	18%	2,080,000
February 25	20%	2,260,000
March 1	36%	2,830,000
March 3	44%	2,710,000
March 9	55%	3,180,000
March 26	65%	3.780,000

Convalescence, uneventful.

I am showing you this case of pelvic tumor where the diagnosis of a submucous fibroid by a hysterogram made by injecting lipiodol into the uterine cavity has been substantiated by subsequent operation

Lipiodol has been used by the profession for radiographic purposes in bronchi, spine, cranium, etc., since 1922, but has just lately been introduced as an aid in gynecological diagnosis. It is a 40 per cent chemical compound of iodine and some vegetable oil, usually cottonseed oil or poppyseed oil. It is not a suspension or a solution, but a definite chemical compound. It loses all the properties of iodine, is non-toxic, unirritating to the mucous and serous membranes, and is slowly absorbed without iodism. Its elimination is not well understood as yet.

Technic: Patient is placed on a radiographic table, aseptic vaginal preparation; novocain is injected into the anterior lip of the cervix, which is then grasped with a uterine tenaculum to hold it firmly. A syringe, 10 to 20 c.c. capacity, tip about one inch long, small enough to enter the cervical canal is loaded with 5 to 8 c.c. of lipiodol warmed to body temperature. The solution is injected slowly, and the syringe is kept in place to prevent back flow while the picture is taken. The picture, if the uterus is normal, will show a triangular-shaped uterine cavity with both tubes, if patent, represented as very thin threads extending out from the cornua of the uterus with a somewhat fusiform enlargement in the ampulla of the tube. Intra-uterine tumors or growths in the wall distort the uterine cavity, and tumors outside of the uterus displace the uterus and cause characteristic pressure defects in the contour of the uterine cavity. If tubes are not patent they will not cast a shadow. If they are patent their shape can be accurately noted and the excess of solution will usually be found in the cul-de-sac.

DISCUSSION

Dr. Wanous: Which is the preferable procedure in these cases of fibroids, radium or surgical operation?

Dr. Pederson: Radium has its place in the treatment of fibroids. Bleeding can be checked and small fibroids may disappear. If the bleeding in this case could not have been stopped by rest and medication, undoubtedly we should have resorted to radium. Radium in doses large enough to make tumors of this size and larger disappear is a radical procedure. Surgery is the more conservative of the two. Radium often produces a cystitis, causes edema of both ureters with back pressure on kidneys and possible pyelitis and worst of all, it completely destroys ovarian function. No surgical operation can do as much damage.

Question: What is the mortality of operations of supravaginal hysterectomy like this at the hospital?

Dr. Adair: Probably about 1 per cent.

By J. H. Simons, M.D.

III. *Puerperal sepsis*: Report of a case of broad ligament exudate following spontaneous delivery; recovery on expectant treatment.

The case is that of C. C., aged 20. Para 2, Grav. 2.

L. M. P., May 6, 1927. Due February 13, 1928.

P. H.: Smallpox; measles; venereal, negative; chronic suppurative otitis media for two years.

Previous pregnancy: One pregnancy; premature labor seven and one-half months, April, 1925. Antenatal period, headaches, pain in upper abdomen; no edema of ankles. In Asbury Hospital three days before delivery on account of "kidney trouble"; urine "full of pus and albumin." In hospital one month post-partum. Followed up by physician six months post-partum for kidney disease.

Present pregnancy: Attended M. G. H. Pre-Natal Clinic. Admitted to M. G. H. in third month for persistent vomiting. Discharged at end of one week. No further vomiting. Urine examination negative. Blood pressure averaged around 110/65.

Phys. exam.: No pathologic or abnormal findings. Temp. on admission 99.8.°

Delivery: Spontaneous eight to eight and one-half months fetus, normal development, January 24, 1928. Labor eighteen hours; first stage seventeen hours. Parturition, O. D. A. No intra-uterine or vaginal manipulation.

Post-partum course; Temp. elevated to 103° morning following delivery. Septic temperature range 97°-104° daily for fourteen days. Repeated chills. Temperature gradually began to drop sixteenth day. Normal on twenty-eighth day up to present time. (7 days).

Laboratory exam.: W. B. C., 10,500-17,000; P. M. N., 70-82 per cent; Hgb., 70 per cent. Blood culture: Staph. Aureus, non-hemolytic. Same on repeat. Cervical smear, Fusiform bacilli. Gram. neg. cocci. Pus cells. Sedimentation time, 7-12 minutes. Urine, negative. Wassermann, negative.

Transferred to Gyn. Service with diagnosis: 1. Acute endometritis. 2. Acute parametritis. 3. Possible thrombophlebitis.

Examination: Marked tenderness in R. L. Q. of abdomen. Palpable mass in right adnexal region extending high in right iliac fossa.

Treatment: Expectant. Symptomatic-palliative.

The history of the previous pregnancy speaks of a urine "full of pus" and six months post-partum treatment. This condition was undoubtedly a pyelitis. No recurrence in the present pregnancy.

The present labor like the previous one was premature but spontaneous and normal in mechanism. Within twenty-four hours there developed a rise in temperature to 103° and a chill with daily repetition. There was a moderate leucocytosis. Twice the blood culture showed staphylococcus aureus nonhemolytic. Sedimentation time 7-12 minutes and a negative urine. The bacteremia probably developed through the lymphatics.

The origin of the infection is undoubtedly autogenous and by a germ of marked virulence and penetrative power. Inoculating the upper genital tract it exhibited its malignant nature immediately after labor. As a source of infection one can justify a supicion toward the chronic suppurative otitis media by the manner of direct inoculation by the patient herself or less likely by blood transmission.

In the diagnosis of the lesion acute appendicitis had to be considered during the first twenty-four hours. Right lower quadrant pain, muscle spasm, tenderness, distention and nausea were present but the tenderness was below McBurney's point, and vaginal and rectal examination revealed exquisite tenderness and induration at the base of right broad ligament. Within a few days a palpable mass appeared and in twelve days it reached halfway to level of umbilicus on the right side with gradual recession during a period of two weeks at which time nothing palpable was left except induration at base of broad ligament.

The mass was exquisitely tender, semifluctuant, smooth, and rounded in outline and located in the right parametrical tissue; confirmed as to location by rectal examination and the fact that the mass rose above the pubic bone parallel to Poupart's ligament. Uterus tender, left side free.

The treatment was symptomatic, forced fluid, and intramuscular blood. Incision above Poupart's when it pressed against the abdominal wall was contemplated but due to rapid resolution of mass, this was not indicated.

Final examination revealed no mass; just induration at base of broad ligament.

Patient returned two weeks after discharge from hospital with a right pyelitis lasting two weeks, which tends to confirm the presence of pyelitis in the first pregnancy.

By F. L. Adair, M.D.

IV. The value of antiluetic treatment during the prenatal period, with report of two cases so treated and one case not treated.

The first case is that of M. A., aged 19, single; Para 0. Grav. 1. Admitted December 24, 1927. L.

M. P., May 14, 1927, date of expected confinement being February 21, 1928.

Patient was admitted in active labor. Physical examination showed pregnancy at seven months, L. O. A. position, and was otherwise negative except for condylomata lata about the genitalia. Blood Wassermann was positive and she gave no history of any antiluetic treatment.

She had a spontaneous delivery December 24, 1927, of a seven months premature infant. The baby at the time of birth showed bullæ on the hands and feet, shny soles, and an enlarged abdomen in which the liver and spleen were palpable. The birth weight of the child was 2,010 gms. *X*-ray of the long bones showed changes about the epiphyseal lines which were interpreted as early changes of congenital lues.

The baby was treated with daily mercury inunctions and was fed with breast milk. On January 9, 1928, the baby weighed 1,820 gms. and was transferred to the Pediatric service for further treatment. It developed a bloody discharge from the nose and mouth and rapidly went down hill and died January 23, 1928, at one month. The baby showed an anemia which was interpreted as being a hemolytic anemia of congenital lues.

The second case was that of A. R., aged 21, married, Para 0. Grav. 2. Admitted February 7, 1928. L. M. P., June 27, 1927. Expected confinement, April 6.

Patient has felt ill throughout pregnancy. Frequent nausea and vomiting. She has had pain in R. L. Q., and was told she had appendicitis. Has had no pains but has had a bloody vaginal discharge since 11:00 P. M., February 6, 1928. She had prenatal care at the M. G. H. Dispensary. Two years ago she had a positive Wassermann and received treatment by an outside physician. Also received treatment at night clinic here. Previous pregnancy resulted in a spontaneous abortion at two and one-half months, April, 1926.

Physical examination: Eyes negative. Teeth in good condition.

Throat: tonsils removed, thyroid slightly enlarged.

Chest: Heart and lungs apparently normal. Breasts normal; nipples well formed.

Abdomen: fundus midway between umbilicus and zyphoid. Back on right, small parts on left. F. H. in L. L. Q. Extremities negative.

Rectal examination: Head at Sta. 2. Cervix 2 cms. dilated 60 per cent effaced.

P. measurement: I. S. 26 I. C. 29. I. T. 32.5 Ex. Con. 19.5. BI. ischial 8. Pregnancy at seven months. Parturition, O. D. A. Lues. Threatened abortion.

On admission, received treatment for threatened premature labor. Morphine 1/6 and atropine, 1/150, and the foot of the bed was elevated for several days. The presenting part receded from the pelvis and bleeding stopped. Then the patient was up and around and signed out against the advice of the doctor on February 14. She returned on February 16 with the same symptoms as before. She was given atropine, gr. 1/100 and morphine gr. ¼ (H), and the foot of the bed was elevated. She was also given uterine sedatives of opium and belladonna. Slight labor pains began February 18, 1928, and were relieved by uterine sedatives and morphine. February 19. at 12:30 A. M., patient began to have pains every 4-5 minutes. These increased in severity and frequency. Rectal examination at 4:20 A. M. showed the cervix fully dilated and fully effaced. Breech in pelvis. At 5:15 A. M. breech extraction of normal female infant. Position S. L. A. Condition of mother and child was good without sign of lues.

Child has had two doses of sulpharsphenamine up to present time, 0.1 gm., intramuscularly and mercury rubs.

Antiluetic treatment of mother. January 22, 1927, 3 plus Wassermann. February 21, 1927, 4 plus Wassermann.

She had seven salvarsan, two intramuscular treatments of mercury, and 1 bismuth by outside physician. January 21, 1927, to February 25, 1927, 6 neo-salvarsan. July 29, 1927, to September 16, 1927, 5 neo-salvarsan. November 21, 1927, to February 3, 1928, 8 bismuth. March 11, 1927, to July 1, 1927, 9 bismuth.

N. J., aged 23, single, Para 0; Grav. 2.

Patient was admitted in labor on February 12, 1928. Her last menstrual period was sometime in June, 1927. The expected date of confinement was rather indefinite, but was supposed to be in April. Measures were taken to avert the labor but this could not be accomplished. As she progressed the fetal head came into transverse arrest and the fetal heart became faint. An internal podalic version was done. A live premature baby was delivered.

In history of the case it was brought out that in November, 1927, the patient developed a chancre of the lip, and a positive Wassermann was obtained. She was admitted to the M. G. H. Dispensary on November 10, 1927, and a diagnosis of secondary lues and endocervicitis was made. She had a secondary luetic rash at that time. A course of 6 neo-salvarsan, 2 of 6 gm. each and 4 of 4.5 gm. each, was given. She developed an arsenical rash and was given 4 doses of 1 gm. each of sodium thiosulphate. Her Wassermann reaction was positive on November 15, 1927.

After leaving the hospital she went to a maternity home and continued her antiluetic therapy at the dispensary where she received eight intravenous treatments.

On readmission here in labor, February 12, 1928, she still had a slight sign of a fading rash over the chest and back. The baby, however, was perfectly normal except for the fact that it was premature. There were no skin lesions on the baby. The baby is getting along fairly well.

At present the baby is being treated with intramuscular injections of 0.1 gm. sulpharsphenamin q 5 days and inunctions of 30 per cent mercurial ointment q. 3 days. The latter has been discontinued because of diarrhea.

DISCUSSION

Williams, in 1915, said that syphilis is the most frequent single cause of fetal death. He found it to be responsible for 26.4 per cent of 705 fetal deaths in 10,000 consecutive labors in his clinic. This included all deaths from viability to two weeks neonatal. Others died after two weeks but are not included. He also found syphilis as a factor in 40 per cent of dead-born premature infants and 80 per cent of the macerated fetuses. He found positive Wassermann reactions in 11.2 per cent of 4,547 consecutive women. The relative frequency in whites and blacks was 2.5 per cent and 16.3 per cent. During pregnancy the initial sore may be large, secondary lesions often slight and may be limited to genitalia where they may be large and may ulcerate. Often no history of a primary sore or rash can be obtained. The effect of syphilis on pregnancy differs a great deal depending on whether the infection occurred (1) before pregnancy; (2) at the time of conception; or (3) during pregnancy. The fetus may be born (1) dead, killed by the luetic virus, (2) alive with definite lesions which appear later, (3) without evidence of the disease, the signs of which appear later, (4) apparently normal at birth to die some weeks later of so-called marasmus or inanition, (5) healthy and never manifest any signs of this disease.

LePileur in a study of the reproduction histories of 130 women found that 3.8 per cent of the fetuses were born dead before as compared with 78 per cent after infection. If syphilis is acquired at the time of conception the offspring is always syphilitic—this rule also applied if the mother has an active infection at the time of conception. When lues is contracted during pregnancy the effect varies; if the infection takes place early, the fetus manifests signs of the disease but if it occurs later the infant may not acquire the disease.

Paternal infection of the fetus is certainly not common and Colles' law does not hold as a rule. If syphilis is present in either parent, the mother should be treated not only for the effect upon her but also for the effect upon the fetus for the arsenical and mercurial salts as well as potassium iodide are easily transmitted through the placenta.

One of the important functions of pre-natal care is the recognition and treatment of syphilis in the pregnant woman. A majority give no history of syphilis and present no visible signs. A routine Wassermann helps in the detection of this disease.

If treatment is instituted by the fifth month of pregnancy, congenital syphilis can almost be eliminated. The pregnant woman and the fetus are very susceptible to the anti-syphilitic treatment so that a moderate amount often results in the birth of a normal child. The mother, however, should be subsequently treated to a complete cure.

PROCEEDINGS OF THE MINNESOTA ACADEMY OF MEDICINE

Meeting of April 11, 1928

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town and Country Club on Wednesday evening, April 11, 1928. Dinner was served at 7 P. M. and the meeting was called to order by the President, Dr. John E. Hynes, at 8 P. M. There were 44 members present.

The scientific program of the evening consisted of two papers, and case reports as follows:

1. Dr. M. S. Henderson (Rochester) read a paper on "Bone Cysts of the Upper End of the Femur," illustrated by lantern slides.

DISCUSSION

Dr. A. C. Strachauer (Minneapolis): Dr. Henderson has given us a very valuable presentation of the subject of giant-cell tumor. It is most unfortunate that this tumor, which is usually benign, has been known as a giant-cell sarcoma. It is not a member of the sarcoma family, and the confusion arising from erroneously calling it "sarcoma" has led operators to perform numerous unnecessary major amputations. Bloodgood has been indefatigable in his efforts to correct this situation and has accomplished much good. Czerny, in the 80's, advocated conservative treatment for these tumors.

We have had a considerable number of giant-cell tumors at the Cancer Institute and at the University Hospital. In the first year of my practice I conservatively treated a giant-cell tumor of the lower end of the fibula. The patient is living and well, and there has been no recurrence to date.

The evidence obtained by the Roentgen ray is as valuable, if not more valuable, than the microscopic examination. The chambered appearance, reminding one of the "Chambered Nautilus" is extremely characteristic and practically pathognomonic. Dr. Ewing states that the microscopic examination has often led him astray, and he puts more dependence on the macroscopic and *x*-ray examinations for making a diagnosis. The tumors should be removed by curetting or local resection. Occasionally we have had to amputate on account of the extreme degree of local destruction that had taken place, as in the head of the tibia. Giant-cell tumors have been reported by competent observers as giving rise to metastases. These reports are rare, and the correctness of the diagnosis is open to question.

In conclusion: Giant-cell tumors are not members of the sarcoma group, do not metastasize, should be treated by curettage and local resection, and do not carry the indication for amputation except in cases of extreme local destruction in the lower extremity. They occasionally recur locally and should then be treated conservatively.

Dr. A. Schwyzer (St. Paul): A number of years ago Dr. Codman sent out an inquiry to the Fellows of the College of Surgeons about living cases of sarcoma of bone. I reported among others a case of giant-cell tumor I had operated on in 1897. It was a tumor of the external condyle of the femur and had gone a little beyond the bone. It had involved the adjoining capsule and fibrous parts. We considered the tumor to be a frank sarcoma at that time, and amputation was made. That woman is perfectly well to-day, and Dr. Codman wrote me it was the oldest case they had with a complete record. Fortunately I still had the original microscopic sections, the specimen, and the history, and I still see the patient from time to time. It has been very difficult for me to make a diagnosis from the microscope. I would like to know a little more about the differentiation by the microscope. I had, a few years ago, two cases of tumor of the condyle of the femur. Both had been operated on by local excision by other surgeons and came with recurrence into my hands. I thought they were giant-cell tumors. One I have operated on several times since because of a repeatedly recurring growth, and there is nothing left of the condyle but a very thin bony shell. The young man still has a movable joint to-day. He still has his leg but cannot use it very much and gets around with a crutch. He got large doses of *x*-ray. The other case had also been operated on by local excision. When he came to us the mass had reappeared locally and I scooped the whole thing out. The man later died, apparently from lung metastases.

I should be glad if Dr. Henderson would tell us more about the microscopic differentiation, as I think we accepted the inflammatory theory of these giant-cell tumors too much in bulk.

Dr. H. B. Zimmermann (St. Paul): I would like to ask Dr. Henderson if he thinks that the giant-cell epulis and the giant-cell tumor the same thing

Dr. A. R. Colvin (St. Paul): Several years ago I had an opportunity to study two cases that made a very lasting impression upon me. One of them was a case of enlagement of the upper end of the tibia, in the service of, and that had been amputated by, the late Dr. Gillette in the earliest days of the *x*-ray in St. Paul. The radiograph looked exactly like a bone cyst, and so it was thought better to explore it; amputation was done as it was thought to be a sarcoma. I got the specimen, and in all of my reading since that time I have not lost track of that picture. The patient was a man about 54 years of age. The cavity was about the size of a large-sized hen's egg. The tumor-like material was made up of a raisin-colored mass of veal-loaf consistency that was made up largely of the kind of giant-cells Dr. Henderson shows here. The limiting membrane of this tumor mass was just as definitely constructed as the inner membrane of an eggshell. It peeled right out. Of course, that could not be malignant. That was about twenty years ago, but at that time I made sections of the tumor, the membrane, and the contiguous bone, also the cartilage next to the bone. Nowhere had it invaded the membrane, the bone, or the cartilage. Clinically that was benign.

About the same time a young girl 18 years of age came to me with a tumor of the femur, which was so rapidly growing that I wondered if it was osteomyelitis. At exploratory operation it was found to be an infiltrating tumor, and I took some tissue for examination. I have microscopic slides of both of those tumors to-day, and I cannot see any difference between the histologic pictures in the encapsulated tumor and the infiltrating one.

Dr. Henderson's pictures of the upper end of the femur are very important. I wish Dr. Henderson would tell us a little more about the case that was a degenerating tumor and he thought was a cyst. Somebody has said it is so much easier to say "what a cyst is not than what it is." A bone cyst has a very thin, almost translucent, membrane with a clear yellowish fluid.

Regarding the diagnosis and the decision of what to do: There was not any question at all about this girl I spoke of. Histologically, I am quite sure if one explored a case not infiltrating so rapidly, a mistake might be made. Ever since those two cases I have laid down the rule for myself that I must have a very distinct limiting membrane for the tumor before pronouncing it benign. The microscope tells us a good deal, but, in spite of all classifications, the giant-cell tumor of bone is occasionally possessed of potentially malignant characteristics. The common epulis Dr. Zimmermann refers to will recur if it is not removed entirely. It seems to me the *x*-ray combined with what you find when you explore is just as valuable as the histologic findings.

Dr. Wallace Cole (St. Paul): There is one point which Dr. Henderson did not make very clear in his paper and which I think should be definitely accentuated, and that is, these giant-cell tumors of bone certainly do perforate the cortex and invade the soft tissues but never infiltrate them; that is, the fibrous capsule of the tumor always remains intact. I have seen several of these cases where a lobulated mass of tumor was sticking out through the bone into the soft parts, but where, on account of the intact limiting membrane, complete removal of the tumor was possible.

Dr. E. S. Judd (Rochester) read a paper on "Hirschsprung's Disease," illustrated by lantern slides.

DISCUSSION

Dr. C. B. Wright (Minneapolis): I remember seeing one of these huge colons removed while I was a student. The little patient died the same day. It gave me early a prejudice against colectomy in this condition.

In 1924 I routinely examined 250 children at the Lymanhurst School by barium enema, and found two cases of megacolon, one a boy aged 8 and the other a girl aged 13. All of these children had been carefully studied by competent pediatricians without the condition being suspected. Sever found one of these cases in 83 routine studies, suggesting that about 1 per cent of children have this condition. None of these cases were extreme. The history of constipation from birth is characteristic.

I remember seeing two other extreme cases with very large abdomen. I have not been able to trace any of these cases. The reason we see this condition so seldom in adults is probably because they so seldom live to adult life, or, possibly, in some cases normal function is later established. Megacolon acquired in adult life suggests some organic obstructive condition. In true Hirschsprung's disease no organic obstruction is found. Aside from daily large enemas, there is nothing to do, so far as I know, medically. The parents of the four cases I recognized had all found this out for themselves. If the sympathetic system is at fault, as indicated by the brilliant results in these two cases, we have reached a new epoch in our knowledge of functional conditions of the colon and possibly other segments of the gastro-intestinal tract.

Dr. E. L. Gardner (Minneapolis): I am very much interested in this problem, especially the question of sympathetic control. I would like to know what has been the effect of these operations on the size of the colon after a barium clyster as compared with those taken before the operation. I have seen quite a number of megacolons in adults, but I do not have the chance to see many in children. Symptoms are few and the health remarkably good in many cases. One middle-aged woman just recently came in complaining of heaviness in the pelvis. She had always had normal bowel movements except when on a vacation, she said. She had been on an automobile trip and had not had a bowel movement for one month. With the help she received at the office she filled a pail full and walked out very happy. Sometimes the signs of atonic colon develop in people as they grow older. I have felt that there are many cases not necessarily of the congenital type, who first have the trouble in expelling the stools, either due to spasm from fissures about the anus or from using cathartics for a long while, and who upon starting to take enemas first get a dilatation of the rectum and then a dilatation of the colon farther up. There is a definite sequence of events. This whole question of the size of the colon is an interesting one. Where does the spastic colon leave off, and where does the normal and the megacolon begin? If patients take large enemas over long periods of time it seems very possible that the large enemas may dilate the colon.

I think hygienic treatment is extremely important. I have kept the colons quite empty and have the patients use rather concentrated food with the idea of recovery of tonicity of the colon. A colon will adjust itself to stay in any position where it is accustomed to stay, possibly explained by Sherington's law of postural tonus. If the colon is habitually dilated it will often stay dilated. An enema of sweet oil every day or every other day is often helpful. I have felt that this type of colon in adults was materially aided by non-toxic doses of thyroid extract even where the basal metabolism is within normal limits.

Dr. A. Schwyzer (St. Paul): We surely have to thank Dr. Judd for having brought before us this interesting subject. As to the etiology of megacolon: We always divide between the one due to obstruction and the one which is congenital. I never could convince myself that this congenital type was analogous to other similar congenital hypertrophies. Such spontaneous hypertrophy and enlargement cannot be accepted readily and surely before every possible difficulty of emptying the gut is absolutely excluded. Just the last two cases that Dr. Judd showed us might give us a clue. To explain the result there must have existed beforehand a difficulty in the peristaltic action, which really means the same thing for the parts above as some kink or obstruction of the colon or rectum. Then we say that Hirschsprung's disease is seen in infants without any definite cause; that it is therefore congenital. The cases where we have an abnormal ending of the rectum in the vagina, or, as I saw in one case, in the bladder wall, have an excuse for their large colon; they have difficulty in emptying. One case in a small child with the most enormous colon I have ever seen, might be interesting in this connection. The child when seen had peritonitis from distention ulcers. There had been difficulty in emptying the bowel for a long while. Upon examination and some dilating of the anus a hard calcified mass about the size of a walnut flew out followed by a great quantity of fluid feces. Nothing else was done.

The child died in a day or so. In the last two cases of Dr. Judd's, where sympathectomy had such good results, the dilatation and hypertrophy seem to have been due to a form of difficulty of passage, due to abnormal innervation. Thus the dilatation and hypertrophy appear again to be secondary and are made comprehensible.

Dr. A. E. Benjamin (Minneapolis): I have seen a few of these cases. One I remember was an acute obstruction of the bowel in a woman eighteen years of age. I went into the country to operate on her. The obstruction was in the descending colon. She gave a history of chronic constipation and partial obstruction. I found a hard mass, just like baled hay, in the bowel and a small opening in the center of it, through which the fecal current had passed. I incised the bowel and took the mass out. That was about five years ago, and she has been well since.

It is difficult to know just what one is to do in these cases. I have tried taking out a part of the colon and making a side anastomosis and have found that quite satisfactory. Where cecum-sigmoidostomy is done, it leaves the large bowel in the abdomen. *X*-ray in these cases shows that some of the barium would travel into the redundant loop, but the majority of it goes through the artificial opening.

Dr. H. P. Ritchie (St. Paul): Did I understand Dr. Judd to say that in one case, one side only of the chain was taken out, and in the other both sides were taken? I suppose it is too early in our experience in this field to ask if there is a reason for excising one or both chains.

Dr. Judd (in closing): Regarding Dr. Ritchie's question: Dr. Adson took out the second, third, and fourth sympathetic ganglia on the one side only in his first case because the condition involved just the sigmoid. A bilateral operation was performed in the second case as the condition was much more extensive and involved the entire colon. I think Dr. Royle and Dr. Wade carried out only a unilateral sympathectomy in their cases. I am sorry that I do not have post-operative *x*-rays of the colon of these children to present here tonight. Both of them are coming in for an examination this week. We are anxious to see what changes have taken place in the size of the colon.

I presented this subject with mention of these two cases simply as a suggestion. I do not wish to be understood as advocating this form of treatment in all cases.

Dr. Gardner's and Dr. Wright's discussions brought out the essential points regarding Hirschsprung's disease (megacolon). All those doing abdominal surgery are well aware of the fact that colons vary a great deal in size. In some individuals it may seem to be definitely dilated and yet apparently function normally. I think what Dr. Gardner said about conservative treatment should be emphasized. Surgery should be employed only when obstruction is present and when conservative treatment fails.

Dr. A. Schwyzer (St. Paul) reported two cases:

Case 1.—A woman twenty-five years old had several operations for ischiorectal abscess with fistula following and incontinence since 1924. It seems tuberculosis was suspected but not demonstrated. For one year the patient, a violin teacher, has not been able to work. Much indigestion, nausea, and diarrhea with loss of weight had been present. The diarrhea was almost constant during the past six weeks, four or five bowel movements daily. The incontinence persists. Weight eighty-five pounds. Dr. Wyatt, who studied the case very carefully, found a mass in the right iliac fossa which he considered as probably a tuberculosis of the cecum. And that is what the case proved to be.

On operation, which was done with local anesthesia with a small amount of gas and ether during the second half, the first gut seen was a fleshy, thick ileum loop which was rather rigid. It led to the cecum which formed a thick mass. If you look at the roentgen picture, you will see the colon enema end somewhat irregularly, and laterally a fine thready shadow leads toward the pelvis. This I recognized as ileum, which was correct; but as I had not yet at that time examined the patient, the site and size of the tumor mass was not entirely clear to me and this thin thready shadow reminded me strongly of a case of fibroplastic appendicitis, where the ileum was stretched over and obstructed by a fibrous mass of the size of an orange, in the center of which we found the remnant of a gangrenous appendix. In that case, as in the one under discussion, an ileocolic resection had to be done. We always make an end-to-end anastomosis in resection of this type; the ileum is cut obliquely from the mesenteric attachment backward. This increases the nutrition of the cut edge and enlarges the lumen. Then the stitches are simply taken a little wider on the colon side. Three continuous linen sutures made a good inversion of the ends for about one inch and this insures against leakage. Omentum was wrapped around the suture, and the abdomen was closed tight. The wound was not more than four inches long. This was keeping the gut well in the abdomen and seemed very desirable in the worn-out patient.

The specimen shows the lowest six inches of the ileum very much thickened and rigid. On opening the gut this whole area was seen to be ulcerated. The cecum was similarly changed, and the appendix, whose base was ulcerated when seen from the inside, was thick and embedded in the thickest portion of the mass. Microscopic examination showed giant cells. The mucosa of the ileum was almost completely ulcerated away.

Case 2.—A man seventy-six years old came to the office on account of spells of lower abdominal pain which he had had for thirty years every two or three years. Between spells he felt perfectly well. An *x*-ray examination showed a number of small diverticula of the colon. One, the size of a small marble, was seen on the cecum, a rather rare location. But I show you the case on account of numerous and very beautifully seen diverticula of small and large size in the uppermost jejunum loop. Here you see, besides small ones of the size of French peas, some as large as large walnuts. As the patient, upon questioning, declared he had distress also in the mid-abdomen, and as he declared that he had to have something done for his pains, we operated under local anesthesia. The only tenderness on pressure was in the appendix area; but we had to see what these jejunal diverticula meant. Through a moderate-sized right rectus incision the uppermost jejunum loop was taken hold of. It looked normal to ordinary superficial inspection. The gut was free, flabby, and regular in outline, and the mesenteric attachment was normal. Here you see the little fatty specks near the gut (*x*-ray shown); and blood vessels were regular. Nothing abnormal was noticed. But we knew the diverticula were there. So I grasped the loop above and below and forced what air there was in the neighborhood into this loop. Now suddenly air popped into one of the large diverticula between the two peritoneal blades of the mesentery, then another and another and another popped full, corresponding exactly to the *x*-ray picture as you see it here. When our hold was released and the diverticula were again empty, nothing was seen. The walls of these diverticula were exceedingly thin, but there was no trace of any inflammation anywhere.

On the inner aspect of the cecum, as you see here in the *x*-ray picture, there was the diverticulum we expected to find. An old thin whitish scar ran over it, but again it was very thin-walled and free from any recent inflammatory signs. The appendix, however, was reddish, hard and kinked, and rolled up on its mesentery. It was removed. The patient, operated on on March 26, is feeling very well and has no pain any more.

DISCUSSION

Dr. A. T. Mann (Minneapolis): I would like to ask Dr. Schwyzer if he did anything to the large diverticulum?

Dr. Schwyzer: I did nothing with the diverticula. They were considered accidental findings. There were no signs of inflammation. The man was seventy-six years old; he has had no pain since the appendectomy, is up and about and very happy.

Dr. Judd (Rochester): I have seen quite a number of cases of tuberculosis of the cecum. I have also seen a number of cases of tuberculosis of the ileum. In my experience, however, the case which Dr. Schwyzer reports is unusual because it seems to show a continuous involvement of the cecum and lower ileum. In most of the cases that I have observed the tuberculous process has been confined to the cecum. If the small bowel is affected, there are usually several separate areas of involvement with marked dilatation of the intestine between them. His case is very interesting and unusual.

His second case, that of diverticula of the jejunum, is also most interesting. It shows more extensive involvement by this condition than any case I have ever seen. In a few instances I have seen a diverticulum in the jejunum near the ligament of Treitz and occasionally diverticula of the jejunum below this.

Dr. E. M. Hammes (St. Paul) reported a case of tuberculous meningitis of over two months' duration with no evidence of meningitis during the course of the illness and in which the spinal fluid was normal throughout except for a decrease in the sugar.

DISCUSSION

Dr. A. T. Mann: I would like to ask two questons: First, were the knee jerks equal on both sides, and, second, were there any miliary tubercles in the eye fundus?

Dr. Hammes: All reflexes were normal throughout at all times except that both abdominal reflexes were absent.

As far as I was able to ascertain, examination of both fundi revealed no evidence of any miliary tubercles.

Carl B. Drake, M.D.
Secretary

CHRONIC OSTEITIS OF THE SEMILUNAR BONE WITH HISTORY OF A CASE (Kienbach's Disease)

By Clyde A. Undine, M.D.
MINNEAPOLIS, MINNESOTA

A chronic, slowly progressive type of osteitis of the semilunar bone was described by Kienbach in 1910. Prior to 1909 only fifty cases had been reported.

Probably the first to recognize this lesion was Peste, in 1843. In 1910 it was again called to the attention of Kienbach. Speed was the first American author to record a case of Kienbach's disease. The symptoms usually are pain on movement of the wrist and limitation of motion to a varying degree. The pain is usually of an aching character, which usually becomes quite severe while performing manual labor. There is usually a history of injury in these cases, although in the case observed by Dr. Jos. J. Kurlander, there is no such injury. Keinbach is of the opinion that this condition follows an injury to the blood supply of the semilunar bone.

CASE

A man, aged thirty-five, came to my office complaining of pain in the right wrist on the dorsal surface, also complaining of swelling when using the right hand.

This man, a porter in a Minneapolis hotel, injured his right wrist, in August, 1925, by hitting his hand across the edge of a table. Pain was severe for twelve hours, with stiffening of the wrist for two weeks. A month later pain again started.

Fractures of the carpal bones are rare. Dislocations of the bone are more common. Roentgenograms at the time of the accident showed nothing abnormal. Roentgenograms six months later showed fragmentation and destruction of the semilunar bone, a rare clinical evidence called Kienbach's Disease.

The diagnosis of this case of Kienbach's disease rests upon the following facts:

1. History of injury.
2. Pain upon movement of the wrist.
3. Swelling of the wrist and pain over semilunar bone.
4. Roentgenogram examinations first made.
5. Later Roentgenograms showing fragmentation.

Surgery was advised against and a splint worn. After several years the symptoms subsided.

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BOOK NOTICES

The Surgical Clinics of North America. (Issued serially, one number every other month.) Volume 7, No. 4 (Brooklyn Hospital Number, August, 1927.) 311 pages with 168 illustrations. Per clinic year (February, 1927, to December, 1927). Paper,

$12.00; cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company.

This number is intended to give a cross-section of the activities and problems of the several divisions of the Department of Surgery of the Brooklyn Hospital. The material is collected mostly from cases and studies of groups of cases presented at the weekly conferences of the Department. Although there has been no attempt to make this a collection of rareties, still some subjects have been purposely omitted because they have been so thoroughly discussed in the past few years. Gastric and duodenal ulcer, biliary disease, appendicitis, empyema, goiter, and some other subjects do not appear. It would not be practicable to list the thirty-seven clinics presented, but a few at least should be mentioned.

Gastro-intestinal surgery includes a clinical and pathological report of a case of acute exacerbation of chronic ulcerative colitis, presenting itself as an abdominal emergency.

In another clinic there is described a series of three tumors of the ileocecal valve—carcinoma, fibroma, lymphosarcoma. Each is associated with intussusception. The problems in diagnosis and surgical treatment are well presented.

There are several interesting clinics relating to bones, joints, and muscles.

A discussion of open reduction in the treatment of fractures is illustrated by a few cases. It is felt that there is a definite limited field for open reduction; that it should be avoided whenever it is possible to obtain a good functional result without it; that internal splinting should be avoided whenever possible. Other cases are presented to explain the development of the present treatment of osteomyelitis of long bones at Brooklyn Hospital. This clinic is worth serious consideration.

There is a clinic of four cases of osteitis deformans. Another clinic on carcinomatous metastasis to bone embraces six cases reported individually and an analysis of twenty-nine cases in all. In most of these the primary growth was in the breast.

In a different clinic, Dr. J. E. Jennings describes a modified technic for radical operation for breast cancer. He feels that the standard incisions enter areas that may be called dangerous. He shows how his incision avoids (1) the lymphatics high up in the axilla, especially beneath the pectoralis minor; (2) the fascia of the chest wall; (3) the skin of the axilla and the lymphatics of the lower chain. All these areas are removed en masse with the tumor and without invasion during the operation.

There are several worth-while urological clinics. One is a review of 100 consecutive nephrectomies. Another presents cases of bladder carcinoma, stone in the female urethra, chyluria, and ureterocele. In other clinics there are presented cases of hypernephromatosis secondary to advanced pyonephrosis and unilateral fused kidney complicated by calculus.

Among gynecological clinics are presentations of cases of acquired atresia of the cervix and a benign solid tumor of the ovary. There is also a report of 257 gynecologic cases treated with radium alone or combined with surgery. In this last the section on carcinoma of the cervix deserves special reading. The only encouraging results have followed the Byrne cautery operation combined with the administration of radium; the results reported after that procedure seem quite encouraging.

There are many more interesting clinics in this number, such as those on embolism, transfusion, and gas bacillus infection, but space does not permit review of them.

—T. H. Sweetser, M.D.

Local Anesthesia. By Geza de Takats, M.D., Assistant Professor of Surgery, Northwestern University, School of Medicine, Chicago, Ill., with an introduction by Allen B. Kanavel, M.D., Professor of Surgery, Northwestern University, Medical School. Octavo of 221 pages with 117 illustrations. Cloth, $4.00. Philadelphia and London: W. B. Saunders Company, 1928.

This treatise on local anesthesia is intended by its able author as a short course for postgraduate students and surgeons. It is a text of ten chapters completely covering all surgical fields.

Its manner of presentation, together with its many illustrations, makes it, as the author has intended, a text of safe and practical methods in the uses of local anesthesias. Each subject is fully described, and an unprejudiced opinion as to the indications and contra-indications of local versus general anesthesia in each case is given.

This book is written after ten years of use of local anesthesia in the University of Budapest as Professor of Surgery at Northwestern University.

Because of its brevity it is pleasantly lacking in cumbersome and oft-times unreliable details and data.

—G. Sheryl Cabot, M.D.

The Collected Papers of the Mayo Clinic and the Mayo Foundation for 1926. Volume xviii. Edited by Mrs. M. H. Mellish and H. Burton Logie, M.D. Octave volume of 1,329 pages with many illustrations. Philadelphia and London: W. B. Saunders Company, 1927.

This volume of 1,273 pages is composed of the collected papers from the Mayo Clinic for the year 1926. As mentioned in the foreword of this volume, "Papers of general interest in more limited fields have been abridged, abstracted, or referred to by title only to meet the interests of the general surgeon and diagnostician."

Approximately one-third of the book is devoted to diseases of the alimentary tract consisting of diagnosis, treatment, technic, statistical surveys, and experimental investigation. The remainder of the book is about evenly divided under eight headings: 1. Urogenital organs; 2. blood and circulatory organs; 3. miscellaneous; 4. head, trunk and extremities; 5. ductless glands; 6. nervous system; 7. chest; 8. skin and syphilis.

The contributions to this volume are from the various departments of the Mayo Clinic, and the papers are in many instances replete with statistical charts and illustrations of interest.

A compilation of this type containing as it does varied contributions, will of necessity appeal to each reader from his own viewpoint depending upon his particular field in medicine.

It is well edited in large-sized type resulting in easy reading and should be a valuable addition to any medical library.

—G. Sheryl Cabot, M.D.

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"SCIENCE MEASURES MORALS"

This is an abstract of an article in the *World's Work* of May, 1928, by Albert Edward Wiggum, our old friend of "Fruit of the Family Tree," and a very interesting article it is.

The first paragraph is as follows: "Ever since Adam and Eve made a moral success of one boy and a failure of the other, the training of children in character has been one of the chief concerns of parents. From that time till our own day character education has been the ultimate goal of all education."

Mr. Wiggum questions all the vast efforts to educate for character, on which we spend hundreds of millions of dollars. He wonders whether people are actually made better or worse, and he finally reaches the conclusion that no one knows. Among other questions that he asks is, "Does the teaching of an ideal to an individual before he has himself gone through the experiences which caused that ideal to grow cause him to incorporate that ideal into his own behavior, or does it merely result in sentimental weakening of his character? Does requiring a pledge promote a sense of honor or a disintegration of the sense of honor? Does requiring a child to keep a record of its good deeds make it virtuous or priggish? Or does it teach the value of successful lying? Does rigid discipline, such as that of military schools and camps, promote self-control or dependence on external props?"

Mr. Wiggum answers these questions by saying nobody knows the complete answer to a single one of these and a thousand other similar questions. Yet we are spending millions of dollars very year in the assumption that the answers are simple and obvious.

"In view of this chaotic situation, it is a credit to the Institute of Social and Religious Research of New York City that it has within the last four years carried on an extensive research in an effort to answer a few of these questions with scientific tools. The investigations were made by Dr. Hugh Hartshorne, of the Teachers College, of Columbia University, and Dr. Mark A. May, of Yale."

This sort of investigation is rather startling, and brings to the notice of educators and scientists and people in general a very vital question in life, and it shows a very singular outcome as the investigation was given, or the tests were given, to 10,865 school children from 8 to 16 years of age, taken from many types of schools, public, private, progressive, old-fashioned, rich, and poor. Of course this means a very intricate study of problems, and the general reader in pursuing the report of these scientists, would find, as Bill Nye found in reading Webster's Dictionary, that the plot is sometimes difficult to follow.

"On a number of tests the problems were steeply graded in difficulty, and they found that a pupil who cheated when it took a lot of trouble to cheat, would also cheat when it was easier. That is, if he cheated at a certain point of difficulty he cheated all the way down the scale."

Another test was devised, called "The Improbable Achievement Test." This is a test which we have seen in the daily press consisting of a large number of small circles arranged in a large ring on a sheet of paper. The test is taking a pencil and with eyes closed put as many dots as possible in each one of these circles going round the ring in serial order. It says, further, that any high degree of success is ample proof that the subject peeked. Another subject was that when a child took a problem home with him he made a much higher grade than the child who did not, which seemed proof rather conclusive that he had received help or used the dictionary. Then the child who tried the puzzle arranged with a number of coins in a small box was tested for the stealing type of deception. When the children returned the boxes there seemed to be no way by which the box used by each child could be identified, but they were secretly marked. As a result some children stole some of the coins.

Then he quotes quite at length about the deceit of children who lie to escape disapproval or punishment, and, secondly, to gain approval or reward. When the question was passed out to the children whether they ever cheated on any sort of tests the liars were easily detected because their records were already recorded.

It is impossible, of course, in these tests to inquire why these children cheated or lied or in some way deceived themselves and others. That would require too much of the racial or home conditions. The girls almost uniformly cheated more than the boys on tests taken home. This, the author believes, is due to the stronger desire in the girls to excel, rather than to an inferior sense of honor. They found, too, that there was no belief more deeply seated than that people of high ability and genius are of doubtful morals.

As far as the study was carried it indicates that this is a wrong conclusion; in fact, it indicates the contrary. In fact stupidity and deception went together, but on the average the more intelligent the children the higher were their average scores for honesty; but they were only averages. There are many exceptions to the average rule.

Another interesting phase of the investigation was the question of "What are you afraid of?" Why oppose a psychological or Freudian investigation? In this way they exhibited a "neurotic index," similar to that worked out for soldiers during the war, and it was found that those with a high neurotic index tended to cheat somewhat more than did the most honest group.

One of the most surprising discoveries of this investigation was that the occupation of the parents had a very consistent relation to the honesty of the child, and it seems that the test worked out in this manner: They were divided into four groups, the first was composed of professional, large business men, accountants, architects, physicians, teachers; the second, small business men, foremen, highly skilled labor; the third, skilled labor—plumbers, electricians, plasterers, mechanics; and fourth, unskilled laborers.

The children of the first group stand out as the most honest; the last three groups were much alike but much below the average. The question of why the small business man should have a child less honest than a large business man or banker is not very clear. The author of the tests suggested that the conversation of the father and his associates and what might be called trade morale, play a part in determining the result. Brothers and sisters were found to resemble each other in intelligence. Almost everybody admits that bright parents are more likely to have bright children than are stupid parents and morons. The research found that honesty and dishonesty ran in families about as intelligence does.

One of the finest things that came out in the investigation was that in some schools there would be a teacher whose classes ran distinctly higher for honesty than did others in the same building. But in one school where the pupils were very dishonest they passed the following year under one of the superior teachers, so that within a single year this class changed from the most dishonest to the most honest class in the school building. That is a compliment to the teacher who is gifted with brains and having stability to impart the right principles, hence she is a better class of educator than is commonly found.

It was found that various indiscretions originated from bad homes, quarreling parents, and several other factors. So that it seems to be reasonable that we may expect a better class of children from a better class of family than otherwise. It means the proper bringing-up of the child by the proper kind of parents. Education and honesty to such children comes through such influences. Sociable children were neither more nor less dishonest than unsociable children. Private-school children were somewhat less honest than public-school children of the same social level.

A most ingenious handicap score was worked out for each pupil in these various groups. The character and atmosphere of a home played an important part. Also, whether the parents got along with each other well, and how they dealt with the child. There was devised a "good manners" test. The pupil was asked to score as true or false such statements as the following: "If the soup is hot blow on it." "In helping yourself to sugar, use your own spoon." "A boy should not detain a girl to talk on the sidewalk." "When not in use the teaspoon should be (1) left in the teacup, (2) placed on the table, or (3) placed on the saucer."

The investigation found further that it was no handicap in being honest whether a child came from a Catholic, Jewish, or Protestant home. A study was made definitely between these three types of children, that is, whether they were Catholic, Jewish, or Protestant, and there was no difference between them as to whether the child was honest or not. Those who attended church regularly were no more honest than those who went occasionally. The final conclusion of the two doctors was very interesting.

First, they decided that moral behavior is a thing that can be measured; second, the effects upon moral behavior of various agencies and methods of teaching can likewise be measured. They suggested again the removal of temptations and also rewards for honest conduct; and they believe, too, that the experiment shows that the sense of honor is an inner personal possession and is the natural outcome and sole reward of behavior.

So that heredity, environment, and training seem to be the principal triad on which we conduct ourselves.

THE AMERICAN HOSPITAL ASSOCIATION

This Association meets in San Francisco at their wonderful auditorium from the 6th to the 10th of August, 1928. This promises to be one of the best meetings held by the American Hospital Association, which is an organization of 1,260 hospitals in the United States and Canada, and it maintains an information service which is at the disposal of all hospitals, whether members or not.

This service undertakes to furnish the latest information relative to hospital methods, procedure, construction, and equipment, or any other information pertaining to the successful operation of a hospital.

This Association also maintains a placement service and undertakes to furnish hospitals and other institutions of this character having vacancies among their personnel with references and credentials of applicants seeking positions.

It also undertakes to review all proposed legislation affecting hospitals, and through its legislative committee inaugurates action to support all legislation worth while and of benefit to the hospital field, and to prevent the enactment of legislation prejudicial to such institutions.

The head office of the Associatiton is 18 E. Division Street, Chicago, a large institution in itself. Dr. Louis H. Burlingham is the president-elect of the Association.

Recently at a meeting in Louisville, Kentucky, May Ayers Burgess, Ph.D., read a paper on "Nurses, Patients and Pocketbooks." She was the head of a committee to investigate hospital problems. The committee spent $35,000 in looking up this information. A large part of this work was done by nurses. Dr. Burgess does not hesitate to express a very positive opinion. She had four tasks:

1. To reduce and improve the supply of nurses.
2. To replace students with graduate nurses.
3. To help hospitals meet costs of graduate service.
4. To get public support for nursing education.

She very sharply criticises the nursing field as it now exists, and she says that young women inadequately equipped with the educational facilities or training are drawn into the hospitals because it is difficult to get other help. This she believes is a wrong thing to do. In our observation of hospital work we can understand her objection. In the first place, from an educational point of view, she finds in private duty 19 per cent of the nurses have never been beyond the first year of the high school. In public health but 13 per cent, and in institutional work 16 per cent have never been beyond the first year of high school. From the same group 10 per cent of the private duty nurses went beyond the first year of high school, 22 per cent of public health group and 22 per cent of institutional workers have had at least one year of college work. The college figures are encouraging, but the figures for one year of high school or less are generally serious.

Any young woman who does not go beyond the first year of high school, if she belongs to the modern generation, is at once a subject for scrutiny. Something is the matter; it may be she will make a valuable nurse, but the chances are that she is stupid or lazy or worse. Apparently many hospitals are willing to admit a low grade of women as student nurses under careful supervision; but these women are totally unfit to assume such responsibility as is needed from a trained nurse in a sick room whether on private duty or in an institution. Dr. Burgess intimates that one-sixth of all the graduates are in this uneducated and under-intelligent group. They are dangerous and unsafe people with whom to trust desperately ill patients, yet they go out into the field without supervision and patients have no means of knowing that they are not representative of the rank and file of nurses, consequently they also bring the whole nursing profession into disrepute.

She intimates, further, that there is need for swift action; that every six months means a difference in the size of this problem. In 1928 there will be very nearly 20,000 graduates from nursing schools, and well over 3,000 of these women will never have gone beyond one year of high school. From now until the end of 1931 the nursing schools will finish their work already begun. She compares the nursing school with the medical school. In 1880 there were over 3,000 graduates. In 1900 there were over 5,000; then came the re-organization of medical education, and the number of graduates dropped gradually until in 1920 there were barely 3,000. In 1926 the number increased to about 4,000, and this is expected to represent the average number of graduates in medicine for many years to come.

In nursing in 1880 there were 157 graduates for the entire country; in 1890 there were 471. As the years went on 1926 brought the number up to 18,000, and this Dr. Burgess thinks is rising with shocking rapidity. The increase is far beyond that of the increase of general population. There are probably at the present time about 200,000 graduate nurses in this country, and approximately 128,000 of these nurses do not belong to the American Nursing Association.

The American Nursing Association now enrolls about 35 per cent of the graduate nurses in the United States. The American Medical Association, it is interesting to note, enrolls 73 per cent of all graduate physicians. Evidently the number of nurses will proportionately decrease if the Grading Committee of the American Nursing Association carries out its plans. Perhaps they will meet the same criticism which is now being made against the medical profession, that there are not enough doctors to carry on the work in the rural districts. The nurses, like the doctors, will all try to get into hospital positions rather than go into the rural districts.

PEARL MITCHELL HALL

The Superintendent of the State Tuberculosis Hospital at Ah-gwah-ching, Minn., near Walker, died last week from an acute infection.

Dr. Hall was a man very well known. He was born in 1860, being 68 years of age at the time of his death. He came to Minneapolis many years ago. His father was a practicing physician and his brother, Albert H. Hall, was a celebrated attorney here. The two brothers had most engaging smiles and expressions.

After practicing a number of years in homeopathy in Minneapolis, Dr. Hall became health officer of Minneapolis and continued in that capacity for many years. He was a genial man, courteous and well informed, and he knew health work to a nicety. Very naturally he drifted toward special work in tuberculosis after his predecessor had given up his position. He continued in that capacity until his death. His position as Superintendent of a state institution came under the jurisdiction of the Board of Control of Minnesota. He made of his institution the very best of its kind, having 325 beds, and always considered a very comfortable place.

The editor and publisher have known Dr. Hall for the greater part of a lifetime in Minneapolis, and from the best recollection he was always the same courteous, gentlemanly, happy, and cheerful person, a rather rare combination in a medical man of his kind.

NEWS ITEMS

Work has been begun on the U. S. Veterans' Hospital building at Fargo, N. D.

Dr. T. J. Catlin has moved from Cloquet, Minn., to St. Peter, Minn.

Dr. L. G. Culver, of Stillwater, has gone to Europe for two years' postgraduate work, mainly in Vienna.

Dr. W. B. Grise, of Austin, Minn., was married to Miss Myrtle E. Fellman, of St. Hilaire, Minn., last month.

The late Dr. H. H. Kimball, of Minneapolis, who died last month, left $10,000 to the Hennepin County Medical Society.

Dr. L. J. Kaasa, of Albert Lea, has been appointed County Physician of Mower County to succeed Dr. A. Guillixon, resigned.

Dr. O. E. Locken, of Crookston, has been appointed medical examiner by the Department of Commerce at Washington for this division of air regulations.

Work on the new hospital for Britton, S. D., is progressing so rapidly that the hospital will be opened probably in October. Funds for the amount of $50,000 are in sight.

Dr. Ralph Minard, of Midland, S. D., died last month at the age of 59. Dr. Minard was a graduate of Tufts College Medical School, of Boston, class of '98, and came to South Dakota in 1907.

At the annual meeting of the Scott-Carver Medical Society, held at the Mudcura Sanitarium at Shakopee, Dr. H. P. Fischer, of Shakopee, was elected president, and Dr. B. H. Simons, of Chaska, was elected secretary-treasurer.

The Commercial Club of Moose Lake, Minn., has appointed a committee to make plans for the completion of the hospital of that city which was started in 1924, but left unfinished. Dr. Thomas Moe is a member of the committee.

Dr. William S. Morrison, of Fremont, Minn., died last month at the age of 88. Dr. Morrison was a graduate of McGill, class of '65, and came to Minnesota in 1867 and continued practice in Winona County until his retirement several years ago.

Dr. Charles T. Granger, who has practiced medicine in Rochester, Minn., for nearly forty years, has given up practice in that city and may establish a clinic and conduct a hospital at McGregor, a summer resort in Aitkin County, Minn.

The lowest infant mortality rate in 1927 in cities over 250,000 population was shown by Seattle, Wash. This rate was 41 for every 1,000 births. Minneapolis and Portland (Ore.) tied for the second lowest rate, 47 per 1,000 births.

The annual meeting of the South Dakota State Medical Association next week (August 7, 8 and 9) at Hot Springs promises to be one of the best in the history of the Association both professionally and socially. It will be well worth attending.

The State Board of Medical Examiners of Minnesota have induced S. R. Kirby, a "John Till" doctor of New York Mills, Minn., to retire from practice. The new Basic Science Law accomplished the result, after years of failure by the Board to do so.

Dr. Margaret Koch, who graduated from the University of Minnesota, College of Homeopathy, class of '95, and practiced for some years in Minneapolis, died last month in Los Angeles, Calif., where she had been engaged in practice for some years.

The Seventh District (Sioux Falls) Medical Society of South Dakota has taken steps to meet the problem of the so-called "shopper about," that is, the person who changes doctors as soon as he exhausts his credit in one office by going to another. The bills of such person will be collected by one agency.

The physicians of Minot, N. D., gave Dr. Peter A. Nestos a complimentary dinner last month on his departure for Bristol, Conn., where he goes to become chief surgeon in a large hospital. Very hearty resolutions of appreciation were passed, and a golf bag full of suitable "instruments" was given Dr. Nestos.

Dr. Pearl M. Hall, of Ahgwahching, Minnesota, died on July 19 at the age of 68. Dr. Hall was a graduate of the General Medical College of Chicago, class of '82, and came to Minneapolis the next year, where he practiced until he was appointed Medical Superintendent of the State Tuberculosis Sanatorium near Walker ten years ago. He was Health Commissioner of Minneapolis for two years. He edited a health department in the *Minneapolis Tribune* for a number of years and early became interested in the prevention of tuberculosis. His work at the State Tuberculosis Sanatorium was highly praised by the State Board of Control.

The Opening Dedication of the New Home of the Children's Hospital of St. Paul

The Children's Hospital, of St. Paul, opened and dedicated its new building on July 17, and began anew, in a beautiful building, erected and equipped at a cost of nearly $300,000, a large and unique work.

Dedicating addresses were made as follows:

"The Scope of the Children's Hospital and Its Educational Importance to the Community." By Dr. Joseph Brennemann, medical director and chief of staff, Children's Memorial Hospital, Chicago.

"Preventive Medicine and the Modern Children's Hospital." By Dr. Henry F. Hemholz, professor of diseases of children, Mayo Foundation, Rochester, Minn.

"The Importance of the Research Laboratory." By Dr. F. W. Schlutz, chief of the department of children's diseases, University of Minnesota.

The Hospital has a capacity of 75 beds, and it will admit children from birth to fifteen years of age. Its purpose is to study the diseases of children, to prevent such diseases, and to cure sick children.

It will aim to impart knowledge of children's affections to doctors, nurses, parents, and the public generally. In short, the scope of its work is indicated in the titles of the above-named addresses.

This Hospital has been characterized as "a haven for afflicted children, where the poor need pay nothing, those who can will pay something, and the wealthy will pay more."

This Hospital is a gift of generous St. Paul public-spirited men and women to the public. Its founder was Dr. Walter R. Ramsey, of St. Paul, who is its Medical Director. Its medical staff is composed of fifteen of that city's leading practitioners.

The Aberdeen (South Dakota) District Medical Society

The July meeting of the Aberdeen District Medical Society was held on Tuesday evening, July 17, at the Aberdeen Chamber of Commerce with about thirty-five members and guests in attendance.

The following program was presented:

1. Fundamentals of Medical Education. By Dr. G. R. Albertson, Dean of School of Medicine, University of South Dakota, Vermilion, S. D.
2. The Application of General Surgical Principles to the Eye. By Dr. Charles N. Spratt, Minneapolis, Minn.
3. The State Health Laboratory and the General Practitioner. By Dr. J. C. Ohlmacher, Director, State Health Laboratory, Vermilion, S. D.

After a discussion on collections and credits, a motion was carried that a committee, consisting of Drs. C. E. McCauley, H. I. King, and R. L. Murdy, all of Aberdeen, be authorized to institute a bureau of collections of accounts for the Aberdeen District Medical Society.

H. G. Mayer, M.D.
Secretary

Location Wanted

By a general practitioner in a good town with a prosperous territory. Unopposed practice desired. Address 495, care of this office.

Physician Wanted

In an inland county-seat town; large unopposed territory; 200 population. Good opportunity. Address the Bison Commercial Club, Bison, South Dakota.

For Sale

Private well-equipped hospital with capacity of 25 beds. Northwestern Minnesota county-seat town of 5,000. No open hospital within thirty miles. Will sell all or part. Practice too great for one person. Price $15,000. $5,000 down, balance terms. Address 498, care of this office.

Association Wanted

A physician, thirty-two years of age and married, desires association with a general practitioner or surgeon. Have had three years country practice. Prefer the Twin Cities or a city over 20,000. Licensed in Minnesota. Reason for change: tired of small town. Speak Danish and German. Address 500, care of this office.

Fine Location for Physician in Minneapolis for Rent

In a new up-to-date heated building under construction at corner of 40th and East Lake Street. A dentist has already taken lease in the building for five years. Also up-to-date living rooms on the same floor. Rent, moderate. Address Manville Mandel, 320 Lumber Exchange, Minneapolis, or Telephone At. 1885 or Hy. 0182.

Physician Wanted

In North Dakota town of 1,200. Established practice in prosperous community well advanced in diversified farming, situated on main transcontinental line. One competitor. Practice for sale by widow of physician recently deceased. Purchase of office equipment only requirement. Applicant should have good command of the German language. Address 499, care of this office.

Opening for Physician in South Dakota

A good town of 450 population has never been without a physician until now. Present physician is sick in hospital and may have to retire. Will rent his office and equipment for $25 a month. Town has a four-year accredited high school, three churches, and all lines of business. Mixed population. Detailed information will be given by Commercial Club or druggist. Address 501, care of this office.

Wanted

An experienced stenographer who has worked in a doctor's office and has been trained to do *x*-ray work. Address 502, care of this office.

Wanted

A good, young physician; permanent position with a manufacturing concern; good salary; short hours. Address 503, care of this office.

Physician Wanted

Splendid opening in town of 200 population, nearest doctors 12 miles north, 20 miles east, 25 miles south and 17 miles west. Not necessary to buy practice. Former doctor left to enter Clinic. For full information write Secretary Business Men's Club, Clifford, N. D.

Physician Wanted

The trustees of a State Fraternal Home for orphans and aged located in southwestern South Dokota, city of about seventeen hundred inhabitants would like to secure physician to locate there. Will make contract covering care of guests in the Home with monthly settlements. Excellent opportunity to establish private practice in addition. Address 505, care of this office.

Physician Wanted

Opening for a physician in a good N. E. Nebraska town of about 800 population. Nearest town west about 25 miles. Two towns between with no physician. 11 miles to nearest town on east, 20 miles to a physician on south, 4 churches. One of best schools in the country. Very good surrounding territory in all directions. Only one other physician. Will rent or sell office and residence as I have been here 33 years and wish to retire. Address 506, care of this office.

For Rent

Physician's and Surgeon's office. New building, 3805 Nicollet Ave., Minneapolis. Waiting room in common with established dentist. Rent reasonable. Apartment in conjunction if desired. Address or call upon Drs. Gerde and Bruss, 608 Besse Bldg.

Locum Tenens Work Wanted

By a middle-aged graduate of an A1 medical school. Available at once. Address 508, care of this office.

Physician Wanted

A class "A" physician to care for my general practice from August 20, to October 16, with the privilege of a permanent location if satisfactory. Address Dr. F. S. Kidd, Woonsocket, S. D.

Half-Time Laboratory Work Wanted

In Minneapolis by a thoroughly competent technician with highest of references. Address 511, care of this office.

Practice for Sale

A $9,000 yearly general practice in good town of 1,350 in North Dakota. Large territory; good collections; no competition. Exceptional opportunity to make money right from the start. Practice and equipment for sale; no property or real estate. Very liberal terms. Ad appears but once. Address 512, care of this office.

Woman Physician Wanted

At the Home School for Girls at Sauk Center, Minn. Apply to the Supt., Mrs. Mary L. Stewart.

Work Wanted

Physician, 33 years old, married, desires assistantship or partnership to a doctor with large obstetrical and surgical practice. Licensed in Iowa and North Dakota. Five years successful country practice. Reasons for desiring change: poor collections, oldest child beginning school. Applicant has some hospital training. Strictly ethical. Speaks German and French. Ready to leave November 1, 1928. Address 487, care of this office.

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PROCEEDINGS OF THE GENERAL SESSIONS OF THE NORTH DAKOTA STATE MEDICAL ASSOCIATION

Wednesday, May 23, 1928

The first general meeting of the Association was called to order at the Elk's Home, Devils Lake, N. D., at 9:30 A. M., Wednesday, May 23, 1928, by the President, Dr. Thomas Mulligan, Grand Forks.

Address of Welcome

Mr. A. V. Haig, President City Commission: Mr. President, Members of the North Dakota State Medical Association and Ladies:

I have had the privilege of representing the city on several occasions when conventions were held here, but I thought this would be something a little different. While all conventions are held with the idea of transacting heavy business, many of them find time for different things, but you men whom we have learned to look up to a little more than the average citizens I thought would be here for business only, but I see this is going to be the usual convention we always have—late in getting here this morning, which means that you were busy last night, and some coming with their golf clothes on, which indicates that they are more interested in golf than in professional matters, at least for the time being, as many of us are.

I do want to say, ladies and gentlemen, that Devils Lake feels highly honored by having you here for your convention. We enjoy having any convention meet in our city, because we realize that the benefits are accruing more to us than to the visitors, because it is a privilege to have an opportunity to meet with our friends over the state and give them an opportunity to see what we have that they do not have, as well as to give them an opportunity to see what we should have.

It would be unwise for me to attempt to extol the advantages of Devils Lake, and you probably would not care to hear about all of them. We have some advantages in this region that are not found in other parts of the state. Nature has favored us in this way, and we hope to have the privilege of letting you see what those things are. We are proud of our city, and while I might stand here and tell you over and over how glad we are to have you here it would mean nothing if the people of Devils Lake did not do anything to show you how glad they are to have you here. A city is as good as the people living in it, and that is why we do not hesitate to proclaim that we have the best city in the state. We think we have a wonderful lot of citizens, and I am sure you will feel the same when you leave. We are glad to have you here, not to have you spend your hard-earned money, but because we want you to know our people and them to know you. We are proud of the men of your profession who represent our city, and we are proud of our hospital facilities. I think that is one of the greatest assets any city can have, and we want you to see them all. We realize that the men of your own profession are the ones who invited you first to come here for your convention, and it devolves upon them to see that you are well taken care of, but we who are on the outside demand the privilege of taking part in your entertainment. We are unfortunate, perhaps, in having a good share of the Scotch in your profession, and I am sure you will not get away with any more than you leave.

We are truly glad to have you here. We hope you will take advantage of every facility for business or pleasure during your stay. I hope your convention will be a success, not only from the standpoint of your program but from the social features as well. I often think that the social features are the best part of any convention, that, while you are interested in listening to the lectures, the best kick is found from getting together with your old acquaintances and making new ones, and that is what we all like in life. Your convention is a little different from others for us on the outside, for in a business man's convention a person can always sit in and learn something, and get something out of it, but as I look at your program I cannot imagine how a man of only ordinary intelligence can understand anything that you are going to talk about.

We are glad to have the pleasure and honor of entertaining your State Association, and we hope when you leave you will feel that you have had such a good time that you will want to come and visit us again and often. I take great pleasure in welcoming you on behalf of the citizens of Devils Lake to our city. (Applause).

Response to Address of Welcome

Dr. George M. Williamson, of Grand Forks replied to the address of welcome as follows:

Mr. President, Mr. Mayor, Ladies and Gentlemen, Fellows of the Association:

Replying to an address of welcome is more or less out of my line. I had hoped to meet Mayor Haig last night and learn what he was going to talk about so that I could be better prepared. However, I was unsuccessful in that, but we thank you very much, Mr. Mayor, for your kind welcome to your city. I am sure we will enjoy our stay here. We have been here before and had a splendid time and if we have as good a time on this occasion I am sure no one will go away feeling that his time was not well spent. I speak for this Association, whose membership is spread throughout our fair state. We come here, as we meet annually, to talk over the problems that confront us and discuss each with the other our difficulties and the best way to handle them, and to take note of the progress scientific medicine has made during the year, all for the good, Mr. Mayor, of the people you represent. That is the aim of those who practice the healing art scientifically. We are not unmindful of the assistance we get from the public; for instance, such as the Committee on Tuberculosis, the Parent-Teachers' Associations, and others who are doing good work, but there is room for improvement. I have found how much better the work could be if we could get their attention and keep them from listening to the nonsensical things that are poured into their ears by the representatives of the cults and quackery. It is astonishing how well informed people, from whom we expect better things, will listen to what is told them by the irregulars. No one can point to a single scientific discovery given to humanity by the cults whereby the span of human life might be lengthened or the health of man improved. We have more or less of a struggle at each legislative session in this state to keep the cults and irregulars from gaining recognition and foisting their nefarious practices on an uniformed public. For Devils Lake and Ramsey County I can say that the men you have sent to the legislative halls have been with us 100 per cent. We are proud of that, and you should be proud of the men you send down there.

I am fairly well acquainted in Devils Lake, and I do not believe there is a city anywhere in North Dakota with a better lot of boosters, who take hold and pull together or with a better community spirit than you have in Devils Lake. They are altogether in their work for the interests of the city and I think that is what has put you on the map.

Mr. Mayor, we appreciate all the nice things you have said about our profession, and I promise you that you will have our co-operation and support in all movements that are for the good of your community. I hope when we meet here again the waters of the Missouri will be rolling in and filling your celebrated lake, and that the cool breezes that come to us on a sultry night will refresh us without bearing the perfumed odor we get now. Seriously, I can bespeak the hearty support and assistance of the entire profession in your efforts to divert these waters, the benefits to be enjoyed by all communities through this mid-west region of our state. The benefits can not be estimated by the almighty dollar, when one considers the sanitary and health-giving advantages to be obtained.

I am sure we will enjoy our visit to your city. Everything necessary for a successful meeting has been arranged by the local committee, and we hope some time in the not too distant future to be with you again. During my life I have met the mayors of many cities and I can truthfully say to my fellow practitioners that none has surpassed in versatility, diplomacy, tact, and rare good judgment, or has possessed more of those qualities which tend to make a great community leader than Mayor Haig, who welcomes us this morning. I know him well. On many occasions we have met on common ground, and I know that his word or a promise from him is never broken. He has promised us certain things, and that we may do certain things while we are within his city, all of which I am sure will be fulfilled.

I know our annual meeting will be a pleasant one; and again I thank you, Mr. Mayor, and the good people of your community for all the pleasant things you do for us. (Applause).

The President: I want to add one little comment on something that Mr. Haig said, and that is that I hope sometime the public will feel sufficiently close to the medical profession that they will feel free to drop in and get as much as they can from our conventions, which should be as much as they get from any other. Devils Lake has provided a splendid sunny day for us, and we appreciate the remarks of Mayor Haig.

PROCEEDINGS OF THE SCIENTIFIC SESSIONS

First Day—Morning Session

Dr. J. F. Hanna, Fargo, presented a paper entitled "Twilight Sleep." Discussed by Drs. John H. Moore, Grand Forks; E. M. Ransom, Minot; and, in closing, by Dr. Hanna.

Dr. F. J. Adair, of Minneapolis, presented a paper entitled "Toxemias of Pregnancy." Discussed by Dr. Preis, Bismarck; and, in closing, by Dr. Adair.

Dr. Leonard G. Rowntree, of Rochester, Minn., presented a paper entitled "Recent Advances in Our Knowledge of the Liver in Health and Disease." Discussed by Dr. W. H. Long, Fargo, and, in closing, by Dr. Rowntree.

The President, on behalf of theAssociation, thanked Dr. Rowntree for his splendid presentation.

First Day—Afternoon Session

The afternoon meeting was called to order at 1:45 by the First Vice-President, Dr. John Crawford, New Rockford.

Dr. Thomas Mulligan, Grand Forks, delivered his presidential address, entitled "Evolution in Modern Medical Practice." (See page 365.)

Dr. G. J. McIntosh announced the plans for the entertainment of the Association, including the annual banquet to be held at Camp Grafton, and also the plans for the entertainment of the ladies.

President Mulligan then resumed the Chair, and introduced Sir Henry Gray, LL.D., M.D., F.A.C.S., of Montreal.

Sir Henry Gray, of Montreal, presented a paper entitled "Pseudo-appendicitis." Discussed by Drs. N. Oliver Ramstad, Bismarck; H. M. Waldren, Drayton; and, in closing, by Sir Henry Gray.

The following papers were presented as a symposium on "Cardiac Disease:"

"Functional Heart Disease." By E. L. Tuohy, M.D., Duluth, Minn.

"Organic Heart Disease." By M. A. Mortison, M.D., Battle Creek, Mich.

"Treatment of Heart Disease." By S. Marx White, M.D., of Minneapolis, Minn.

These three papers were discussed by Drs. Leonard G. Rowntree, Rochester, Minn.; J. E. Hetherington, Grand Forks; H. A. Brandes, Bismarck; W. C. Nichols, Fargo; and, in closing, by Drs. Tuohy, Mortinson, and White.

As this concluded the program for the afternoon, the President declared the meeting adjourned at 5:10, to reconvene at 9:00 A. M, Thursday.

ANNUAL BANQUET

The annual banquet was given at Camp Grafton, at 7:30 P. M.

Addresses were made by Judge McKenna, of Napoleon, N. D.; Major Charles W. Lovewell, M.C.U.S.A.; and by Dr. W. A. O'Brien.

Music was furnished by a local Boy's Band, known as the "Governor's Band."

SECOND DAY—MORNING SESSION

The Association reconvened and was called to order at 9:10 by the president, Dr. Thomas Mulligan, Grand Forks.

The following papers were presented as a symposium on "Thoracic Suppurations:"

"Diagnosis." By F. W. Wittich, M.D., of Minneapolis, Minn.; "Pathology." By W. A. O'Brien, M.D., of Minneapolis, Minn.; and "Treatment." By F. W. King, M.D., of Minneapolis, Minn.

These three papers were discussed by Drs. J. G. Lamont, San Haven; F. I. Darrow, Fargo; and, in closing, by Drs. O'Brien and Wittich.

Dr. Arnold S. Jackson, of Madison, Wis., presented a paper entitled "The Recognition and Treatment of Goiter." Discussed by Drs. A. L. Cameron, of Minot; Paul H. Burton, of Fargo; and, in closing, by Dr. Jackson.

Dr. S. R. Maxeiner, of Minneapolis, Minn., presented a paper entitled "A Few Practical Points Influencing the Safety and Success of Local Anesthesia in the Hands of the Local Surgeon." Discussed by Dr. N. Oliver Ramstad, Bismarck; and, in closing, by Dr. Maxeiner.

Owing to the lateness of the hour and the meeting of the House of Delegates, the paper of Dr. F. E. B. Foley was postponed, to become the first order of business at the afternoon session.

The President declared the meeting adjourned at 12:15, to reconvene at 1:30 P. M.

SECOND DAY—AFTERNOON SESSION

The Association reconvened and was called to order at 1:30 by the President, Dr. Thomas Mulligan, of Grand Forks.

Dr. F. E. B. Foley, of St. Paul, Minn., presented a paper entitled "Diagnosis of the Various Forms of Bladder Neck Obstruction." Discussed by Dr. V. J. LaRose, Bismarck; and, in closing, by Dr. Foley.

The Secretary gave a brief report of the proceedings of the House of Delegates, announcing the newly elected officers and the next meeting place.

THE PRESIDENT: Our new President will now take the Chair. Before turning the Chair over to him I only wish to say that this is one of the finest meetings we have ever had. This is due entirely to the Scientific Committee from this city, who prepared for us such a splendid program, and I thank them most sincerely. I also wish to make special mention of our Secretary, Dr. Lamont. He is a wonderful man to work with and a splendid Secretary. I wish to thank all those who have helped to make my term in office a successful one.

I will now ask Dr. Williamson and Dr. Fawcett to escort Dr. Sihler to the Chair. (Applause.)

DR. SIHLER: I have inherited a program with one paper behind, and time does not permit me to show the appreciation I feel for being placed in this position. Perhaps my work through the coming year will show something of this, and my remarks at our next meeting may carry to you my appreciation of the honor you have shown me. We will now continue with the program.

Dr. W. R. Ramsey, of St. Paul, Minn., presented a paper entitled "Infant Feeding, Including Some of the Fallacies." Discussed by Drs. M. D. Westley, Cooperstown; Ruth Mahon, Grand Forks; and, in closing, by Dr. Ramsey.

Dr. Wallace H. Cole, of St. Paul, Minn., presented a paper entitled "Some Common Orthopedic Problems for the General Practitioner." Discussed by Dr. W. H. Witherstine, Grand Forks, and, in closing, by Dr. Cole.

Dr. J. D. McQueen, Winnipeg, Manitoba, presented a paper entitled "Lacerations of the Pelvic Floor and Their Sequelæ." Discussed by Drs. S. A. Zimmerman, Valley City; Richard H. Beek, Lakota; and, in closing, by Dr. McQueen.

Dr. G. N. Ruhberg, of St. Paul, Minn., presented a paper entitled "Early Neurosyphilis without Symptoms." Discussed by Drs. A. M. Guest, Jamestown; John Crawford, New Rockford; and, in closing, by Dr. Ruhberg.

The President: This closes our Annual Session, gentlemen, and I will take this opportunity on behalf of the local committees to thank the essayists who have come to us and brought us the various messages which we have enjoyed and profited by. I also wish to thank the members for the wonderful attendance we have had. We have gone up pretty well toward the top, and we do appreciate it greatly. I am sure we have all received something that has been a benefit to us, and I sincerely hope that in your leisure moments you have not suffered from ennui.

The Forty-first Annual Meeting adjourned at 5 P. M., *sine die.*

J. G. Lamont, M.D.
Secretary

PROCEEDINGS OF THE HOUSE OF DELEGATES

First Meeting—Tuesday, May 22, 1928

The first meeting of the House of Delegates of the Forty-first Annual Session of the North Dakota State Medical Association was called to order at the Great Northern Hotel, Devils Lake, at 8:50 P. M., by the President, Dr. Thomas Mulligan, Grand Forks.

The Secretary called the roll, and the following Councilors and Delegates responded:

G. F. Drew, M.D., Devils Lake.
George M. Williamson, M.D., Grand Forks.
Andrew Carr, Sr., M.D., Minot.
F. L. Wicks, M.D., Valley City.
L. B. Greene, M.D., Edgeley.
Charles MacLachlan, M.D., New Rockford.
H. B. Huntley, M.D., Leonard.
H. A. Brandes, M.D., Bismarck.
H. M. Erenfeld, M.D., Minot.
A. A. Whittemore, M.D., Bismarck.
C. J. McGurren, M.D., Devils Lake.
E. L. Goss, M.D., Carrington.
Thomas L. DePuy, M.D., Jamestown.
E. A. Pray, M.D., Valley City.
C. J. Meredith, M.D., Marion.

The President declared a quorum present and the House duly constituted for the transaction of business.

The Secretary moved that the minutes be accepted as they were published in The Journal-Lancet.

Motion seconded and unanimously carried.

Dr. J. G. Lamont presented the following report:

REPORT OF THE SECRETARY

To the House of Delegates:

The Secretary's report, primarily, concerns membership in the State Association. The following facts may be of interest to the Councilors and House of Delegates.

The published list of physicians practicing in North Dakota, as contained in the Directory of the American Medical Association for 1927, contained 497 physicians. At the time of the last report of the Secretary 389 of these were members of the State Medical Association, and before the end of the year 1927 seventeen additional brought the list to 406 members. Thirty-seven of last year's members are delinquent this year. Five physicians died, and twelve have left the state. Twenty-seven physicians entered the state for practice, of whom sixteen have been reported as new members of the State Association. The total membership at the time of the present report is 386, being three less than at the date of the 1927 meeting. A personal letter from the Secretary's office was sent to all non-members.

Societies reporting a gain in membership are: Sixth, 3; Southwestern, 1; Northwestern, 1.

Societies reporting a loss in membership are: Cass, 5; Devils Lake, 2; Tri-County, 3; Richland, 3; Grand Forks, 3; Stark, 4; Kotana, 2; Southern, 1; Traill-Steele, 1.

Societies reporting same membership as last year are: Stutsman, 23; Sheyenne Valley, 14.

Societies reporting 100 per cent membership: Traill-Steele, 11.

The Secretaries of the District Societies should meet some time during the present annual session for a round-table discussion of our common problems. The most important unit in the American Medical Association is the County Society. Membership and professional interest alike depend entirely upon the success of the quarterly or monthly meetings. A few of the District Society meetings were attended last year by officers of the State Medical Association. These visits should be made more frequently and properly systematized during the coming year, for the mutual advantage of both.

A meeting of the State officers of Wisconsin, Minnesota, and the Dakotas was called at St. Paul, January 15, 1928, for the discussion of topics affecting inter-state medical interests. Such important subjects as the Basic Science Law, simultaneous medical legislation in the different states, matters of public health and medical education, and periodic health examinations were considered. Dr. John Crawford, Vice-President of the North Dakota State Medical Association, and other officers attended this meeting, and a report from them will doubtless be valuable at this time.

Your Secretary was present at the Secretaries' Conference at Chicago in November, 1927. These annual assemblies are well attended, are inspirational in effect, and quite informative as to the general trend of professional thought and policy. Dr. Olin West, Secretary of the American Medical Association, stressed the importance of the County and District Societies as the basic units of organization.

Dr. Jabez N. Jackson, President of the American Medical Association, urged the elimination of professional differences in the local societies and the increasing need of organization to help the individual interest of the physicians in the small towns. Discussion of the Basic Science Law revealed the fact that only five states have such a law in operation at present, namely: Connecticut, Minnesota, Nebraska, Wisconsin and Washington.

It is interesting to note that out of 497 physicians practicing in North Dakota, 361, or 73 per cent, are subscribers to the *Journal of the American Medical Association.* Only two other states have an equal percentage, namely, Illinois and New Jersey, so that, from the standpoint of medical literacy, the physicians of North Dakota are among the leaders.

The *Hygeia* magazine and the *Quarterly Cumulative Index* are worthy of special attention from the profession. The latter has a subscription list at present of nearly 2,500, and is an exceedingly valuable publication to clinics and to physicians requiring assembled information on any subject in any language.

A recent report of the Ætna Life Insurance Company would indicate that the Eastern Section has eighty-nine physicians, the Central Section two, and the Western Section five who are carrying the malpractice indemnity policy with that company.

Excellent teamwork on the part of the Devils Lake Society has assembled for us this year an unusually fine scientific and social program, which we feel sure will be appreciated by the members of the Association.

Respectfully submitted,
J. G. Lamont, M.D., Secretary

Dr. MacLachlan moved that the report of the Secretary be accepted and placed on file.

Motion seconded and unanimously carried.

Dr. William W. Wood presented the following report:

TREASURER'S ANNUAL REPORT

May 31, 1927 to May 22, 1928

Assets and Receipts:			
Balance Checking Account May 22, 1927		$2,002.75	
Savings Account, May 12, 1928		1,637.83	
Interest on Bonds	$ 42.50		
Interest on Savings	23.20		
Balance of Last Year	572.13		
Liberty Bonds	1,000.00		
Dues Received from Secretary		1,955.00	
		$5,595.58	$5,595.58
Disbursements:			
Fifteen (15) Checks Numbered 174 to 188 inclusive		$1,787.67	
Exchange on Checks		3.50	
Total Disbursements		$1,791.17	
Two (2) Checks Issued 1926-1927 not Cashed Until 1927-1928		$ 2.24	
		$1,793.41	$1,793.41
Balance			$3,802.17

Distribution of Funds at the Present Time

Checking Fund Balance	$2,164.34	
Savings Account (includes 2 Liberty Bonds)	1,637.83	
	$3,802.17	$3,802.17

Comparison of this statement with that submitted last year shows a reduction of $50.00 in the amount of dues received, and a decrease of $1,075.92 in the disbursements.

Respectfully submitted,
Signed William W. Wood, M.D., Treasurer

Dr. Lamont moved that the report be referred to the Council for audit.

Motion seconded and unanimously carried.

REPORT OF THE COUNCIL

Dr. G. M. Williamson: As you know, Dr. Smyth, the Chairman of the Council passed away recently, and I have been unable to get any special report of the Council as a whole. I suppose each Councilor has his individual report ready to present.

FIRST DISTRICT—CASS COUNTY

I have no special report to make other than to refer to the suggestion that was made in a letter sent out by the Secretary some time ago relative to the matter of advertising. Our Society had voted on that and appointed a Committee to carry it out legally some time previously. We think a campaign of that kind judiciously handled by the State Association is advisable. We also approve of the idea of blanks for the periodic health examinations.

Supplementary Report

I cannot give you the exact number of meetings, but we had the usual number during the year, and the average attendance was about twenty-five. I think we have had three new members, and we have had no deaths during the year.

H. B. Huntley, M.D.

SECOND DISTRICT—DEVILS LAKE

In the past year our Society has shown more interest in meetings and we have had an increase in attendance. We have lost one prominent member by death, Dr. W. D. Jones, the oldest and best known man among us. We also lost one member to the Sixth District, and one joined the Civil Service forces. We have received one new member who was not a member anywhere before, and one has been transferred from the Grand Forks District to our District. We have had two extra meetings, making six during the year. Our non-membership list seems to be getting smaller. There are now only seven non-members, and two of these live in Rugby and probably belong to the Northwestern District Medical Society. There has been no friction among our members. Our paid-up membership at present is thirty-two against thirty-three last year.

George F. Drew, M.D.

THIRD DISTRICT—GRAND FORKS

The work of the Councilor of this District is a rather easy task. The profession is well organized and well officered. Meetings are held monthly, with a fair average attendance. There are seventy-one doctors in the District, sixty-nine in active practice. The Society has a membership of sixty-one, a very good average. As every one knows, there are some men practicing who think only of themselves and have no interest in their fellow practitioners.

I would like this message to get to all men practicing in North Dakota who are not members of their local and State Societies—that should they decide to remove from this state and seek a license via reciprocity in some other state, they might find some difficulty in having their credentials endorsed, as most states have as one of the essentials for admission membership in their State Association.

On the whole, medical conditions in this district are in a healthy state. I have advised, and hope sometime to see adopted, quarterly meetings, for, as at present arranged, there are too many medical meetings to be attended each month by practically the same group, when one considers the hospital staff meetings in addition to the District meetings.

G. M. Williamson, M.D.

FOURTH DISTRICT—NORTHWEST

The number of members in good standing in the Northwest District Medical Society is fifty-five. There are thirteen non-members in the District, and we have five new members. During the year Dr. Andrew Sinamark left the District and moved to Hibbing, Minnesota.

During the past year the plan of holding meetings each month has been adhered to, and an average number of seventeen attended. Several times during the year outside men have addressed the Society, and every meeting the program has been made up of papers on clinical cases and lantern-slide demonstrations. The meetings were held alternately at St. Joseph's and Trinity Hospitals, and each meeting started with a dinner, which has played its part in keeping up a good attendance.

E. M. Ransom, M.D.

FIFTH DISTRICT—SHEYENNE

The Sheyenne Valley Medical Society usually confines its meetings to the fall and winter months, having three meetings. We have on several occasions accepted the invitation of the Stutsman County Society to meet with them. Our men have enjoyed these programs and the fine fellowship evidenced.

Dr. A. C. MacDonald is our President and Dr. Will H. Moore is our Secretary. We have eighteen members. Dr. R. E. Pray removed to engage in hospital practice in Philadelphia, but Dr. F. Brown came to us from the Tri-County Society, so our membership remains unchanged in number.

The Mercy Hospital, a $250,000 project, is completed and was dedicated on May 14, filling a long-felt want of our community. I think with better facilities in Valley City we will meet more frequently and will be able to reciprocate for the hospitality of other societies. Our Secretary wished me particularly to state that we have been in touch with our State Secretary and have been represented on every action that he has referred to us.

For the Traill-Steele Society, through Dr. Syver Vinje, I may report the following. That Society has every eligible man in its territory as a member. It is a 100 per cent society. At present there are eleven active members, Dr. J. C. Swanson having removed to Iowa.

Three meetings have been held, with an average attendance of nine. The outside men who have appeared on their programs are Dr. C. N. Callander, Fargo; Dr. Arthur Nichols, Fargo; and Dr. J. E. Engstad, Grand Forks.

Dr. M. H. Litman of Hope is their President, and Dr. Syver Vinje is their Secretary.

F. L. Wicks, M.D.

SIXTH DISTRICT—BISMARCK

The number of members of the Sixth District Medical Society is as follows:

January 1, 1927	51
December 31, 1927	52
New members acquired	6
Old members lost	5
Non-members in District	10

We have had five meetings with an average attendance of twenty-seven. The meetings have all been very interesting, and the programs have been good. An effort has been made to have some outside talent present at each meeting, and the meetings have usually been preceded by an informal dinner.

Our Society suffered a great loss in the death of Dr. F. R. Smyth, who was always keenly interested in all the activities of our local and state organizations.

N. O. Ramstad, M.D.

SEVENTH DISTRICT—STUTSMAN

In the absence of Dr. Arzt, Dr. Williamson presented the following report which had been submitted:

"In view of the fact that I probably shall not be able to attend the meeting this year. I wish to submit the following report.

"We have at present twenty-two active members in our Society, which includes all the regular practicing physicians in our County. We have been very fortunate this year in having had six well-attended meetings, preceded by a dinner, which seems to have helped the attendance materially. We have had very good outside speakers for all these meetings, and I am sure we all were benefited greatly. We have had a considerable number of outside physicians with us at all our society meetings, averaging a total attendance of about twenty-three per meeting. This has been a very successful year for us, both from an educational and a harmonious point of view.

"There is one little matter that I wish to mention, on which there has been no action taken. That is, relative to the memorial in Kidder County for one of the pioneer Army Physicians who was buried in that County. I have been unable to get any definite information or data from Mr. Dana Wright, who has been handling this matter for the Historical Society of the State. The heirs or individuals who control this land wish to sell the entire quarter, and do not wish to parcel out a small piece of the ground for the purpose of the memorial.

"Another matter that I would like to call to the attention of the Society is the overspreading activity of the government in caring for the four or five million veterans in the late wars. It seems to me that this might possibly be looked into, by instructing our delegate to the coming Convention in Minneapolis to take some action in this regard."

Dr. Williamson stated that a Special Committee of which Dr. Arzt was a member was considering the matter of the memorial to which he referred.

P. G. Arzt, M.D.

EIGHTH DISTRICT—SOUTHWESTERN

After a quiet period of several years the Southwestern Medical Society is showing signs of reviving. We have had two very good meetings this year and expect to have two more. Our membership is practically the same this year as last. We have lost one member in Dr. E. M. Meadows, who died suddenly a few weeks ago. The Society is in better condition than it has been for several years.

L. B. Greene, M.D.

NINTH DISTRICT—TRI-COUNTY

The Tri-County Medical Society begs permission to present a report of its stewardship during the past year, as follows:

Seven meetings were held, two each in Fessenden, Harvey, and Carrington, and one in New Rockford. These meetings were well attended, averaging over 60 per cent of the total membership. Only three papers were read during the year. One on "Ovarian Cysts," by Dr. Seibel of Harvey; one on "Osteomyelitis," by Dr. Crawford; and one on "The Causes of Suits for Malpractice," by Dr. MacLachlan. Much interest is invariably shown in the discussion of clinical cases.

During the year the Society lost three members, one going to Grafton, another to Valley City, while the third, Dr. John Ross MacKenzie, answered the final call. The Society has acquired two new members, Dr. McKeague, of Maddock, and Dr. Hammergren, of Harvey.

The recommendations of the Committee on Public Policy were received and favorably discussed.

Charles MacLachlan, M.D.

TENTH DISTRICT—STARK

As Dr. Bowen was not present no report from the Tenth District was offered at this time.

J. W. Bowen, M.D.

Dr. F. L. Wicks moved that these reports be adopted as read.

Motion seconded and unanimously carried.

REPORTS OF STANDING COMMITTEES

PUBLIC POLICY AND LEGISLATION

Dr. V. J. LaRose, M. D., Chairman, presented the following report:

There was no legislation introduced at the special session of the legislature called in the earlier part of this year, so there is nothing to report as to legislative activities. I would call to mind, however, the ruling of the House of Delegates that all proposed legislation to be sponsored by the State Society is to be brought before the Society for approval at the annual meeting held during the year of the legislative session; that the legislative committee be empowered to draw upon the Treasurer of the State Medical Association a sufficient sum to meet the expense of keeping a whole-time or part-time man in attendance at the legislative session in order to keep track of all bills introduced that may in any way concern the medical profession, and also to meet other contingent expenses that may arise, said sum not to exceed $500.00.

I have reason to believe that pressure will be brought to bear in another attempt to force hospitals to open their doors to practitioners of the various cults. Failure or refusal to appoint these men on the staff would penalize the hospitals by placing them on the tax list. Many of our hospitals are barely making expenses, and the increased burden of taxation might compel some of them to close their doors. Rulings of many courts throughout the country have placed the burden and responsibility of staff appointments upon the trustees of the hospital. They are both legally and financially responsible for the care and treatment of patients who enter their doors; consequently any employe of the hospital or any member of the staff who may neglect or cause injury to a patient while in the hospital would throw the burden of responsibility upon the hospital management. The right of the trustees to choose their own staff is not given with the idea of making staffs of hospitals closed corporations, or of ruling out competent men from practicing, but the responsibility of the hospital management for its patients compels the hospital to demand the right to name those who shall be members of its staff.

I would suggest that a legislative committee of three be appointed by the president of each component society, and that the names of the members of this committee be filed with the Chairman of the State Legislative Committee so that in an emergency quick action and co-operation can be obtained in the shortest possible time.

Dr. G. M. Williamson: I think it would be a good plan to have the Councilor in each District appoint his legislative Committee. It would be difficult for a man in one county to get in touch with the legislators of the other counties.

I move that the Councilor in each District be Chairman of the Legislative Committee, and that he nominate his own Committee, and send the names of these gentlemen to the Chairman of the Committee on Public Policy and Legislation and to our State Secretary.

Motion seconded by Dr. MacLachlan and carried.

Dr. W. F. Shiler: I move you, Mr. President, that the House of Delegates recommend to the Councilors that they give every possible assistance to our Committee on Public Policy and Legislation.

Motion seconded and unanimously carried.

COMMITTEE ON TUBERCULOSIS

James Grassick, M.D., Chairman, presented the following report:

Your Committee on Tuberculosis reports as follows: The fight against tuberculosis in our state has been kept up as in former years. It seems to be quite well established among the members of the medical profession that prevention is the logical means of control, and that early recognition of the disease offers the best chance for those who are already infected. With these fundamentals in mind the work has been carried on.

It was recognized that early detection and supervision of the cases were imperative if any headway was to be made. Acting on this, a survey was undertaken by the North Dakota Tuberculosis Association to ascertain, as nearly as might be, the location of every one suffering from the disease. The co-operation of physicians, nurses, health boards, and other welfare agencies was enlisted, and a very generous support was given to the project. As a result the existence of many hitherto unknown cases was made known, and the patients were placed under proper supervision and care. Complete figures cannot at this time be given, but enough are available to assure us that the survey was well worth while.

The Tuberculosis Association for some years advocated the erection of a children's building at the State Sanatorium, and as an incentive pledged $4,000 for its equipment. It is a satisfaction to report that this dream has been realized and that the building is now open for the reception of patients. We would respectfully urge that the physicians of the state use their best efforts among those needing such service as the children's pavilion can give, that it may be kept filled to capacity, for only in this way can its full benefits be realized. The children's pavilion was informally opened in the late fall of 1927. It is a very suitable building for the work outlined. There is accommodation for about fifty children, and at the time this report was prepared only twenty children were being treated, one wing being occupied by negative young adult patients. No positive open case of tuberculosis has at any time been allowed in this building, and it is the intention of the management to keep the building completely free from all forms of infection, including open tuberculosis. The building has its own kitchen and dining room, and also a sunny school room, which we hope will later be supported by State funds. Provision is made for treatment by direct sunlight and the ultraviolet ray. The results in cases of early tuberculosis and malnutrition have to date been very satisfactory. The attention of the profession should be centered upon the usefulness of this building for short-term hospitalization of all tuberculous and undernourished contact patients.

A new infirmary central building is under construction, at a cost of $125,000.00. With the completion of this building the institution will have about 240 beds. This, for a time at least, should meet all demands. The long wait necessary for many patients with far-advanced cases who applied for admission during the past two years was, of course, unavoidable.

Respectfully submitted,
J. G. Lamont, M.D.
Fannie Dunn Quain, M.D.
James Grassick, M.D.
Committee

Dr. MacLachlan moved that the report be adopted as read.

Motion seconded and unanimously carried.

COMMITTEE ON NECROLOGY

Dr. George M. Williamson presented the following report:

The Council, acting as the Committee on Necrology, begs leave to report as follows:

Since last we met we have to record the passing of nine of our members: Dr. J. G. Millspaugh, Dr. H. W. Coe, Dr. A. P. Rounsvell, Dr. J. A. Rankin, Dr. V. H. Stickney, Dr. F. R. Smyth, Dr. W. D. Jones, Dr. J. R. MacKenzie and Dr. E. M. Meadows.

The first six in the order named were ex-presidents of our Association. Biographical sketches of those honored members of our profession may be found in "North Dakota Medicine."

Dr. Jones, of Devils Lake, was an outstanding member of our profession, having achieved distinction as an original and independent worker. He was a classmate of Dr. Charles H. Mayo, of Rochester, Minnesota. He located at Devils Lake in 1898 and for thirty consecutive years gave the people of that city and surrounding country a quality of medical and surgical service that was of the highest type. As a friend and associate he was companionable and likable.

Dr. MacKenzie, of Carrington, was a North Dakota pioneer. His brilliant mind, retentive memory, and professional skill gave him a high standing among his fellows, and his genial disposition made him friends wherever he went. He served overseas with distinction as a Captain, M. C., U. S. A.

Dr. Meadows was a graduate of Western University, London, Ontario. He came to North Dakota in 1903 and was licensed on April 16 of the same year. He lived and practiced his profession at Oakes, North Dakota, where he made an enviable reputation as a physician and surgeon.

Respectfully submitted,
George M. Williamson, M.D.
Secretary of Council.

Dr. Williamson: I wish to state that the credit for writing this report should be given to Dr. Grassick, as I gave him the clippings our Secretary sent me and he has compiled the report for us.

The President: I greatly regret that the Great Reaper has laid his hand on so many of our members. I tried to get in touch with the families, and sent them your messages of sympathy and condolence, receiving nice responses from all of them.

Dr. L. B. Greene moved that the report be adopted as read, and recorded with the minutes. Motion seconded and carried.

COMMITTEE ON PUBLIC HEALTH

Dr. A. A. Whittemore, Chairman, presented the following report:

The present health conditions among our people are excellent. We still hold the banner for the lowest death rate of any state in the Registration Area. During 1926 we accomplished the remarkable feat of adding to this the lowest maternal death rate, 4.6. The infant death rate, while not the lowest, is lower than the average and very creditable, 69.8, representing 1,034 infant deaths; 14,824 births were recorded for 1926, with 5,267 deaths.

The ten principal causes of death for 1926 were:

1.	Heart disease	611
2.	Cancer	418
3.	Cerebral hemorrhage	325
4.	Tuberculosis of lungs	234
5.	Tuberculosis, other forms	47
6.	Premature births	262
7.	Diseases of kidneys	274
8.	Lobar pneumonia	217
9.	Appendicitis	131
10.	Diabetes	98

Heart diseases, cancer, and cerebral hemorrhage still hold the highest place. Appendicitis has a mortality rate far higher than our present knowledge will justify. The State Health Department has some very interesting tabulations covering a four year period, which they will be glad to send to those interested.

Communicable diseases are not reported as faithfully as might be desired. However, our reports show general trends and point out epidemics, if not their magnitude. Scarlet fever takes the lead. A few cases of tularemia have been reported. Vincent's angina is increasing and has been made reportable. The following deaths were reported due to communicable diseases for 1926:

Diphtheria	30
Scarlet fever	66
Typhoid fever	16
Whooping cough	70
Measles	30

Two cases of tularemia were reported during 1926, and five cases during 1927.

You realize, of course, that your State Health Department is virtually a Bureau of Vital Statistics for the registration of births and deaths. This is done well, but no constructive health work can be accomplished on our present appropriation. We rank forty-eighth among the states, receiving only 2.9 cents per capita. The average among the Registration States is 9 cents per capita. We are unable to do anything in sanitary engineering, very little along disease prevention, and for 1929 nothing in child hygiene, unless there is a public demand for the support of the Health Department by the next legislature. An unsupported request for an increased budget by the Department officials will receive no consideration.

Certain new proposed legislation should receive your endorsement:

1. Permissive full time District Health Departments.
2. Uniform sanitary code.
3. Uniform plumbing code, with licensed plumbers.
4. Compulsory proper refrigeration of biological products.

It is a surprising and regrettable fact that the majority of physicians are apathetic in their interests in public health, and camouflage this apathy with a statement that any activity on their part for legislative support would do the cause more harm than good. This idea is without any foundation in fact.

We regret to announce officially the death of Dr. F. R. Smyth, the director of the Bureau of Communicable Diseases. It is planned to have the amount of our budget in this bureau matched by the International Health Board with an equal amount. This will enable us to establish both the Bureau of Communicable Diseases and the Bureau of Sanitary Engineering on a firm basis for a period of at least three years, at the end of which time we hope we may be able to convince the legislature that these two bureaus are indispensable. The only condition imposed by the International Health Board is that we choose men to direct these bureaus, the qualifications of whom can be approved by them. This plan has been approved.

We wish to announce that it may be possible to obtain for any County Health Officer the assistance of a man trained in pure milk control for a short period of time, to assist in putting on a milk campaign. We suggest that applications be made early.

Respectfully submitted,
A. A. Whittemore, M.D., Chairman

Dr. W. F. Sihler moved that the report of the Committee on Public Health be accepted. Motion seconded.

The report was discussed by Drs. Grassick and LaRose, following which Dr. Sihler's motion was put to a vote and carried.

The President: I wish to announce at this time that at the suggestion of the American Medical Association we appointed a Committee on Hospitals. The Committee consists of Dr. McCannel, Minot; Dr. M. W. Roan, Bismarck; and Dr. J. F. Hanna, Fargo.

COMMITTEE ON MEDICAL DEFENSE

Dr. E. A. Pray, Chairman, said:

I have no regular report to make tonight. The Aetna people are getting very lackadaisical in their work. They promised to have a report for me, but it has not yet arrived. I may be able to have it for our meeting tomorrow.

REPORT OF SPECIAL COMMITTEES

Delegates to American Medical Association:

Dr. E. A. Pray: I received notice from the Secretary of the American Medical Association not long ago stating that the credentials for the Delegate from our State have not been sent to him. I wish to call attention to the fact that the Committees of the House of Delegates of the American Medical Association are made up several months in advance of the meeting, and this delay will probably keep your delegate off of all committees this year.

THE SECRETARY: Each year the Secretary of the American Medical Association sends a Credentials card for the signature of the State officers. This card was sent to me, and I sent it at once to Dr. Mulligan, who at that time was in California. The card was sent to him there and followed him back to Grand Forks, where he immediately took care of it. I am sure the matter of credentials is all straightened out now, and assure you the delay could not be avoided this time.

COMMITTEE ON MEDICAL HISTORY

Dr. George M. Williamson, Chairman, gave the following report:

I have been able to dispose of two more histories since our last meeting, but we have several more volumes on hand. I would like to get them placed if possible and will continue to try to do this. I think Dr. Grassick has a report on the present status of this work.

Dr. James Grassick presented the following report:

As a member of the Committee on Medical History I beg leave to report that since our last annual meeting some progress has been made. Following a suggestion from the House of Delegates a notice was sent to every medical society in our state requesting the President thereof to appoint a Committee on History whose duty it would be to collect such items of general interest as might be available in their several Districts, and to forward the same to the main Committee. The response was not what we expected, for we were of the opinion that in every District there were matters of surpassing interest to the profession that should be recorded and thus saved to the world, but few reports were sent in. During the past year no less than six of our past presidents have heard and answered their last call. It must be some satisfaction to their fellows who are left to know that sketches of their lives and something of what they had done for their profession and their country had been prepared and made into permanent records. Every worthy member of our profession is entitled to the same consideration, but it is only by hearty co-operation that such desirable results can be attained.

We have during the year been able to collect and arrange enough material to visualize a second volume of "Sketches and Abstracts," but many gaps remain to be filled and these must be added to, if at all, by the profession.

Respectfully submitted,
JAMES GRASSICK, M.D., Chairman

Dr. William A. Gerrish moved that these reports be accepted and placed on file.

Motion seconded and carried.

DR. WILLIAMSON: I am sure no one realizes the immense amount of work Dr. Grassick has done and is doing for us in this way. I hope he will continue it, and perhaps before long we will have a second volume of medical history of our State and can dispose of it. I hope Dr. Grassick will be continued as Chairman of this Committee, and that all the members will co-operate with him by sending him the data and items of historical interest that he needs.

DR. MACLACHLAN moved that the House of Delegates recommend that the Councilor of each District make as a part of his report a historical sketch and items of general medical interest in his District.

Motion seconded by Dr. Erenfeld and unanimously carried.

THE PRESIDENT: I think this covers the business before the House for this evening, and I will entertain a motion to adjourn.

DR. MACLACHLAN moved to adjourn.

Motion seconded, and the House of Delegates adjourned at 10:45 P. M., to reconvene at 12:00 noon, Wednesday, May 23.

SECOND MEETING—WEDNESDAY, MAY 23, 1928

The second meeting of the House of Delegates was called to order at 12:45 P. M., by the President, Dr. Thomas Mulligan, Grand Forks.

The Secretary called the roll and the following Councilors and Delegates responded:

G. F. Drew, M.D., Devils Lake.
George M. Williamson, M.D., Grand Forks.
Andrew Carr, Sr., M.D., Minot.
F. L. Wicks, M.D., Valley City.
L. B. Greene, M.D., Edgeley.
Charles MacLachlan, M.D., New Rockford.
H. B. Huntley, M.D., Leonard.
H. O. Brandes, M.D., Bismarck.
H. M. Erenfeld, M.D., Minot.
A. A. Whittemore, M.D., Bismarck.
C. J. McGurren, M.D., Devils Lake.
E. L. Goss, M.D., Carrington.
Thomas L. DePuy, M.D., Jamestown.
E. A. Pray, M.D., Valley City.
C. J. Meredith, M.D., Marion.
O. A. Knutson, M.D., Buxton.
G. J. Gislason, M.D., Grand Forks.
J. F. Hanna, M.D., Fargo.
E. M. Ransom, M.D., Minot.
Paul H. Burton, M.D., Fargo.
Rolfe Tainter, M.D., Fargo.
H. E. French, M.D., University.

The President declared a quorum present and the House duly constituted for the transaction of business.

On motion, regularly seconded and carried, the reading of minutes of the preceding meeting was dispensed with.

APPOINTMENT OF NOMINATING COMMITTEE

The President appointed the following gentlemen to serve as the Nominating Committee, to report on Wednesday:

Dr. M. MacGregor, Fargo.
Dr. L. B. Greene, Edgeley.
Dr. Edwin L. Goss, Carrington.

SELECTION OF MEETING PLACE

Dr. MacGregor extended an invitation to the Association to meet in Fargo in 1929.

Dr. Sihler moved that the invitation be accepted.

Motion seconded by Dr. Williamson and unanimously carried.

The President: I have a communication from the Health Officer of the State, Dr. Whittemore, as follows:

> Whereas, the preservation of the health of the people is the most important function of government,
>
> And whereas, the present State Expenditure for the support of the State Department of Health is only 2.9 cents per capita; the smallest amount appropriated by any State for this purpose, the average for other states being 9 cents per capita,
>
> And whereas, 1,800 lives in the State are lost every year from preventable causes, together with many times this number permanently handicapped by preventable diseases, the very small amount now appropriated being inadequate,
>
> Be it therefore resolved, by the State Medical Association at its annual meeting, held at Devils Lake, June 23, 1928, that every means possible be adopted by the Association to obtain a minimum appropriation of 6 cents per capita for the support of Bureaus of the Health Department known as the Bureaus of Child Hygiene, Sanitary Engineering, and Preventable Diseases; and that every State legislator be sent a copy of this Resolution.

Dr. Whittemore moved that these resolutions be adopted, and said, in part:

> So far as our State appropriation goes it is the smallest in the United States. The amount given us is ridiculously small. We need a regularly established Health Department in the state and the medical profession to stand back of public health and insist on an adequate appropriation. Last month I called a meeting of all of the state-wide organizations interested in public health, and they passed a resolution at that time supporting this proposition. Our President was there and was one of those who voted affirmatively. I should like to have this organization support these resolutions so that we can have a suitable health organization.

Dr. Whittemore's motion to adopt was seconded by Dr. Lamont.

Dr. MacGregor: I would like some explanation of the deaths in this state that could have been prevented, and of how this could have been done.

Dr. MacLachlan: This subject is so important that I do not think we can discuss it sufficiently in the short time at our disposal to-day. It is a very important matter, and something which we cannot deal with in an off-hand manner. It requires consideration and thought. There is no question about its importance, but I think we should take further time before definite action is taken, perhaps at some later meeting at this House of Delegates. It will also have to come before the Council, and we should have time to bring up these things and discuss them carefully.

Dr. Whittemore: Our Department now is only a Bureau of Vital Statistics. We have nothing to work with, and for medical men who have talked public health for years it does not seem that any further consideration is necessary. I think we all understand that a health department should be supported.

The President: As Dr. MacLachlan says, this is a matter that perhaps demands particular consideration, but my experience is that by merely putting these things back we do not accomplish anything. Passing this resolution does not mean that it has to go before Council, for it does not entail the appropriation of money.

Dr. Sihler: Why not take this up as the regular order of business at the meeting of the House of Delegates tomorrow? I offer this as an amendment to Dr. Whittemore's motion.

This amendment was seconded, put to a vote, and carried, following which the motion as amended was put to a vote and adopted.

The Secretary: The Surgeon-General has requested that each State Medical Association appoint a Military Committee. I will read a portion of a communication which your Secretary received from the War Department:

> It is the desire of the War Department to organize and develop the Reserve Corps so as to provide recognition by promotion in grade and assignment to appropriate functions in organizations in time of peace which will entail the minimum imposition of hardship when called to active duty in emergency, thereby insuring military efficiency.
>
> In order that a better understanding of Reserve Corps affairs may be developed in medical societies, it is proposed that a Military Committee be appointed in each society. The purpose of this committe will be:
>
> a. To establish and maintain contact with the War Department through the Surgeon-General.
>
> b. To promote the organization of the Reserve Corps by procurement of enrollment therein.

c. To receive information from the War Department in connection with the Reserve Corps and to convey the same to the members of the Society.

d. To convey to the War Department recommendations of the Society for the improvement, organization, and training of the Reserve.

In brief, to establish an agency for the development of a more intimate association of the members of the profession and the War Department.

The President: I presume this will be an appointive committee, but the idea of the Surgeon-General and our own idea is to sound out your feeling with reference to the matter.

Dr. Williamson: I move that the incoming President be authorized to appoint such a committee.

Motion seconded and unanimously carried.

On motion regularly seconded and carried the House of Delegates adjourned at 1:10 p. m., until 12:30 Thursday.

Third Meeting—Thursday, May 24, 1928

The third meeting of the House of Delegates was called to order at 12:30 p. m. by the President, Dr. Thomas Mulligan, Grand Forks.

The Secretary called the roll and the following Councilors and Delegates responded:

G. F. Drew, M.D., Devils Lake.
George M. Williamson, M.D., Grand Forks.
Andrew Carr, Sr., M.D., Minot.
F. L. Wicks, M.D., Valley City.
L. B. Greene, M.D., Edgeley.
H. B. Huntley, M.D., Leonard.
Charles MacLachlan, M.D., New Rockford.
H. O. Brandes, M.D., Bismarck.
H. M. Erenfeld, M.D., Minot.
A. A. Whittemore, M.D., Bismarck.
C. J. McGurren, M.D., Devils Lake.
E. L. Goss, M.D., Carrington.
Thomas L. DePuy, M.D., Jamestown.
E. A. Pray, M.D., Valley City.
C. J. Meredith, M.D., Marion.
O. A. Knutson, M.D., Buxton.
G. J. Gislason, M.D., Grand Forks.
J. F. Hanna, M.D., Fargo.
E. M. Ransom, M.D., Minot.
Paul H. Burton, M.D., Fargo.
Rolfe Tainter, M.D., Fargo.
H. E. French, M.D., University.

The President declared a quorum present and the House duly constituted for the transaction of business.

On motion, regularly seconded and carried, the reading of minutes of the preceding meeting was dispensed with.

REPORT OF COMMITTEE ON MEDICAL EDUCATION

To the House of Delegates of the
North Dakota State Medical Association:

Your Committee on Medical Education would report at this time by proposing the following resolutions:

First: That the State Medical Association recommend and urge that all District Medical Societies provide and distribute to their members copies of the pamphlet on "Periodical Physical Examinations" put out by the American Medical Association.

Second: That the State Association begin at once and continue to maintain a modest campaign of medical publicity. That a small standing committee of energetic men be constituted, which shall prepare and collect short articles of as good popular interest and value as possible about health and medicine, and secure such publicity for the same as it can; and that the State Medical Association make an appropriation of a few hundred dollars for the expense of such work.

Third: That in future programs of the State Medical Association more time be devoted, either in the general sessions or in the meetings of the House of Delegates, to a consideration of the general subject of the relation of the profession to the public, having in mind such particular items as medical ethics, publicity, public health, standards of requirements for the practice of medicine and for the cults, postgraduate instruction, and the like.

Respectfully submitted,
H. E. French, M.D., Chairman

Dr. MacLachlan moved to adopt this report. Motion seconded and unanimously carried.

The President: We will next take up the question of the resolutions proposed by Dr. Whittemore.

Dr. Williamson: I move you, Mr. President, that the recommendations of Dr. Whittemore be endorsed.

Motion seconded by Dr. Burton and unanimously carried.

REPORT OF NOMINATING COMMITTEE

Dr. MacGregor presented the following report:

For President—W. F. Sihler, Devils Lake.
For President-Elect—John Crawford, New Rockford.
For First Vice-President—Andrew Carr, Sr., Minot.
For Second Vice-President, H. M. Waldren, Drayton.
For Secretary—J. G. Lamont, San Haven.
For Treasurer—W. W. Wood, Jamestown.
For Councilors:
  Second District—G. F. Drew, Devils Lake.
  Sixth District—N. O. Ramstad, Bismarck.
    (To fill unexpired term of F. R. Smyth)
  Seventh District—P. G. Arzt, Jamestown.
  Eighth District—L. B. Green, Edgeley.
  Tenth District—J. W. Bowen, Dickinson.
For Delegate to the A. M. A.—Charles MacLachlan, New Rockford.
For Alternate—William A. Gerrish, Jamestown.
For recommendation to the Governor for appointment to State Board of Examiners:

W. H. Long, Fargo.
J. E. Countryman, Grafton.
Harry F. Emert, Sarles.

Respectfully sumbitted,
M. MacGregor, M.D.
L. B. Greene, M.D.
Edwin L. Goss, M.D.
Committee

Dr. MacGregor moved that the report be adopted and that the retiring president be instructed to cast a unanimous ballot for these nominees.

Dr. Mulligan reported the ballot cast and declared these gentlemen duly elected to their respective offices.

REPORT OF COMMITTEE ON MEDICAL DEFENSE

Dr. E. A. Pray read the following telegram:

Hartford, Connecticut, May, 23, 1928.
Dr. E. A. Pray,
Devils Lake, N. D.

Stevenson's request for figures nineteenth received this afternoon. Therefore impossible furnish you desired information in detail other than to say that there have been no developments during the past year that indicate any substantial improvement in our experience in either section of North Dakota justifying any amendment in present rate basis.

Signed H. T. Weston
Aetna Life Insurance Company

Dr. Pray: I presume it is necessary to continue a defense committee, but I wonder whether it is worth while to continue a group plan. I have been informed that a group in one of our towns is getting insurance for one-fourth what it costs us with the Aetna Company. It is no more a statewide proposition, but only for the eastern part of the state for the others are getting their insurance elsewhere. I would like some discussion as to whether we should continue the group insurance, and as to whether the Committee on Medical Defense shall be continued.

Dr. Lamont moved that the Committee on Medical Defense be continued, and that they report at the next meeting just what could be accomplished in the way of rates from other companies.

Motion seconded and unanimously carried.

BASIC SCIENCE LAW

Dr. Williamson: There seems to be some sentiment among the Fellows in regard to the Basic Science Law. It might not be a bad plan to instruct the incoming president to appoint a committee who will study this subject and see what can be accomplished, and bring in a report next year.

I move that this be done.

Motion seconded by Dr. MacLachlan and unanimously carried.

Dr. Crawford: I move that the Committee on Medical Defense take up a consideration of certain points that will prevent malpractice suits, such as prevail in the State of Michigan and other places.

Motion seconded by Dr. Lamont and carried.

STERILIZATION LAW

Dr. Paul H. Burton brought up the matter of the Sterilization Law for Insane, and asked an expression from the House of Delegates regarding this law and its enforcement.

Dr. Burton moved that the House of Delegates recommend the furtherance of this law, and that a Committee consisting of Drs. Arzt, Pray, and Miller be appointed to assist Dr. Guest in the enforcement of this law.

Motion seconded by Dr. Crawford.

Dr. MacLachlan thought it was not well to confine such a committee to three, and suggested that Dr. John Crawford, of New Rockford, be included because of the study he had given this matter.

Dr. Crawford expressed the opinion that the men mentioned by Dr. Burton were more competent than he to form such a committee.

The motion of Dr. Burton was then put to a vote and lost.

DELEGATE TO AMERICAN MEDICAL ASSOCIATION

Dr. Pray: The remarks I am about to make are opportune. You will remember that when Dr. Stickney retired as our Delegate to the American Medical Association he said he could not afford to attend these meetings on many occasions. From now on I feel that the Association should pay the full expenses of their delegate.

I move, Mr. President, that the actual traveling expenses of the Delegate to the American Medical Association be paid by this Association from now on.

Motion seconded by Dr. Burton and unanimously carried.

REPORT OF AUDITING COMMITTEE

Dr. G. F. Drew stated that the report of the Treasurer had been carefully examined and found to be correct in every detail.

Dr. Burton moved that this report be accepted

Motion seconded and carried.

The President: I think this completes all matters of business before this House of Delegates, and I will declare the meeting adjourned.

Adjournment at 1:15 p. m.

J. G. Lamont, M.D., Secretary

PROCEEDINGS OF THE COUNCIL

First Meeting—Wednesday, May 23, 1928

The first meeting of the Council was called to order at 1:15 p. m. by the Secretary, Dr. George M. Williamson, Grand Forks.

Dr. Williamson moved that Dr. Charles MacLachlan, New Rockford, be elected to succeed Dr. F. R. Smyth as Chairman.

Motion seconded and carried.

Dr. MacLachlan then took the Chair and thanked the Councilors briefly for the honor accorded him.

Dr. Williamson moved that the President's appointment of an auditing committee consisting of Drs. Drew, Ransom, and Greene be approved.

Motion seconded and unanimously carried.

Dr. Gerrish moved that the appropriation for the Committee on Public Policy and Legislation be the same as heretofore.

Motion seconded by Dr. Greene and unanimously carried.

Dr. Williamson explained what would be expected of the Committees on Legislation in the different Districts, and moved that the recommendation of the House of Delegates be approved.

Motion seconded by Dr. Gerrish and unanimously carried.

Dr. MacLachlan brought up the recommendation of the House of Delegates regarding the collection of historical data by the Councilors, to be incorporated in their annual report, and stressed the need of collecting such data.

Dr. Williamson moved that the recommendation of the House of Delegates in regard to this matter be approved.

Motion seconded and unanimously carried.

Dr. LaRose asked if anything had been done in regard to legislation to be sponsored by the State Association.

The Committee stated that Dr. Williamson, the Secretary of the State Board of Medical Examiners, had had more practical experience in following out the proposed line of basic science examinations than any one else, and requested him to explain what he had discovered.

Dr. Williamson: I think we are not ready for this kind of a law in North Dakota yet. It would take four or five years to educate the people to get ready for it. There is no objection to appointing a committee to study the matter, but I think it would be foolhardy to bring up any Basic Science Bill at the next meeting of the legislature. There is no standardized Basic Science Law at present. Only five states have adopted such a law, and I think the majority of the profession in Minnesota are not satisfied with theirs. I think the Council on Medical Legislation of the American Medical Association are working along this line to see if some practical Basic Science Law can be worked out that will be acceptable to all states. I think we should go slowly, and do nothing more than perhaps appoint a Committee to study the matter and collect data, at present.

Dr. French expressed the opinion that such a law should be watched a little longer before attempting to do anything definite.

Dr. LaRose thought it would be well to first pass a law requiring a certain amount of education before applicants could come before any Board whatsoever.

On motion regularly seconded and carried the Council adjourned at 1:30 p. m., to reconvene at the call of the Chairman.

George M. Williamson, M.D., Secretary

Second Meeting—Thursday, May 24, 1928

The second meeting of the Council was called to order at 1:15 p. m., by the Chairman, Dr. MacLachlan.

Dr. Burton moved that the Chairman write Mrs. F. R. Smyth a letter of condolence from the Council.

Motion seconded and unanimously carried.

As there was nothing further to come before the Council at this time, the Chairman declared the meeting adjourned at 1:20 p. m., *sine die*.

George M. Williamson, M.D., Secretary

PRESIDENT'S ADDRESS: EVOLUTION IN MODERN MEDICAL PRACTICE*

By Thomas Mulligan, M.D.

GRAND FORKS, NORTH DAKOTA

Members of the North Dakota Medical Association:

My first duty on this occasion, it seems to me, should be to thank you for the signal honor you conferred upon me at your last annual meeting in electing me to the highest honor in your gift, namely, the presidency of your State Association.

The traditions and the requirements of this body make it incumbent upon the president to present a paper at each annual meeting, expressing his views on some aspect of medicine appropriate to the occasion. My predecessors in office have performed this duty, without exception, in a very creditable manner. I do not aspire to acquit myself so acceptably as some of them have done, but I would ask you to attribute this to lack of ability, and not to indifference.

When I came into office, my first reaction was to have the officers come into as close contact with the units of the Association, namely, the county and district medical societies, as possible. I wrote the different officials to this effect. It was my belief that, in this manner, we would stimulate interest, loyalty, and enthusiasm among the membership. This has been accomplished very efficiently in some instances by the officers, and I wish to take this opportunity to thank them. I would suggest to my successor to consider this matter, and if it appears feasible to him, I am convinced the best time to begin would be in the summer and fall when travel by auto is good, and when the first reactions to the inspiration of succession to such a worthy office are upon him. I can assure him that I will do anything in my power to assist him.

Before leaving this phase of my address, I wish to thank the officers of the different component societies for sending me their regular programs during the year. These gave me a good idea of the work which was being accomplished throughout the state. The programs were all of a high order and the attendances were good. I regret very much that I could not take part and receive profit and inspiration, and also enjoy the fellowship of my brethren. During the past year the Great Reaper, Death, has laid a heavy hand upon many of our past presidents. Six of them have been called, namely:

Millspaugh, our first president.
Coe, our second.
Rounsevell, our fourth.
Smyth, our tenth.
Rankin, our sixteenth.
Stickney, our twenty-seventh.

Doctor Millspaugh I did not personally know, but Doctor Grassick in his book, "North Dakota Medicine Sketches and Abstracts," has furnished us with a medium by which we may know of our brethern. Dr. Millspaugh's photo and presidential address in that book make us all feel that our first president was a doctor of a great heart and cultured mind, a worthy father of this society.

Dr. Coe I know only through the same book. He was a man of parts, many sided, and shrewd. North Dakota will remember him from his idealism in presenting the equestrian statue of "Roosevelt, the Rough Rider," to Minot.

Doctor Rounsevell I knew personally. He was a gentleman of the old school, possessing a strong personality, polish and poise, and a warm heart.

Doctor Rankin was president when I attended the first meeting of our Society in 1905. In those tender years of mine, I was strongly impressed with his fine masterful appearance and well-balanced judgment in the chair.

Doctor Stickney came early to this state. His name is intimately connected with its history. He did his day's work well, and when it was over he was laid to rest, housed about by the earth of the state which he loved, and of which he was inspired to write so intimately.

I purposefully have left Doctor Smyth to the last, because for him taps has only recently been sounded. His good, intelligent, genial face and rather short stocky figure was the most venerable at our meetings for as long as I can remember. He had the courage and will and enthusiasm to attend some of our late annual meetings when most of us, under similar physical handicaps, would have remained away. We might have had the will to go, but not the courage to come and see our fellows in health and vigor while we were stricken. He loved his fellowmen, and was loyal to his profession. May his memory not soon be forgotten!

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*President's Address, read at the Forty-first Annual Session of the North Dakota State Medical Association, Devils Lake, N. D., May 22, 1928.

Part of my preparation in attempting to write this paper was to review the presidential addresses of some of my predecessors, as far as time would permit. It was interesting to note the different angles from which they viewed their problems. Science appealed to one, progress of the Association to another; ethics; medical legislation; etc., were some of the other themes. Such reactions were bound to manifest themselves, for each year carries with it new problems. The subject upon which I might base my paper was not an easy one for me to solve. I might have chosen the line of least resistance, and written upon some topic such as the great accomplishments in medicine during recent years. This would be an aspect upon which one might easily and justly paint a glowing picture, of which we might all be proud. But I did not so choose, but rather decided to write upon a less pleasant one, in which I will attempt to discuss some ills or "growing pains" of our profession, as I have seen them for myself, and as I have had them brought to my attention by the spoken and written words of men high in our own profession, and also by others in the lay world whose judgments command respect. The subject which I felt might best cover these thoughts is "Evolution in Modern Medical Practice."

You are all aware that during the past two decades in particular, there has been a great evolution in the practice of medicine. The general practitioner, especially in the larger towns and cities, has been largely replaced by the group or clinic, in which each man follows his own particular field, and is known as a specialist in his line. When a patient presents himself, each man in the group will go over that part of the body which lies within his specialty. The different findings are then assembled, and a diagnosis is made, and the appropriate means taken to relieve the ills of the sick person. In the larger and more complicated clinics it is rather the custom to put all patients through a common routine, with such variations as may require special investigation. In the smaller group this routine is not so lavishly followed. Then there is the doctor classed as a diagnostician, who limits himself to the field of diagnosis alone, as I understand it. When the diagnosis is made, the patient is referred to his family doctor for treatment with, very probably, some suggestions made as to future care.

In addition to these two classifications, there are many other specialists, who limit themselves to certain regions of the body, such as eye, ear, nose, and throat, or some one of these alone; the heart man, the chest man, the gastro-intrologist; the rectal specialist; the genito-urinary man—one might prolong the list to include many more divisions, but these will suffice. The division of work has been the natural sequence of the findings of research workers in the physical sciences. The magnitude of this work has been so enormous that it was felt a necessity to divide the work in order that a man might acquaint himself sufficiently with some phase so that he could make more intelligent application of these discoveries. This movement has been called specialization, and has not been confined to medicine by any means, but has invaded the other professions, such as law, education, engineering, journalism, etc. It includes all enterprises of the commercial world as well. It was found necessary in the business world especially, that to carry on in a large way, and make profit, an organization was very necessary. Certain men have a great genius for organization, such as Henry Ford, in the commercial world. In such a group there is the *master mind* with imagination and poise, judgment, and energy. He is a judge of men, and hence capable of selecting good heads for his departments, and they in turn organize these departments, so that the further down one goes the less ability and initiative is required, so that one becomes more or less an automaton. Yet one of these lesser cogs in the wheel may be able to do his particular job better than the chief or his assistants. Is he not entitled then to be called a specialist in his work? I think so, but he has made a great sacrifice, the loss of his individuality. The very same principle has been carried into medical practice, especially in the great clinics, and to a lesser extent in the smaller ones. The narrower the field the smaller the cog, and the more contracted the vision. Medicine can never lend itself to the same system of organization as the business world, or other professions, because we are dealing, not with lifeless materials, or subjects, but with the most precious and interesting of the world's treasures, namely, human individuals, with personalities, and minds and souls which will defy any and all classification. This very quality of the human individual is what makes of medicine the most interesting and most potential profession for good of human activities.

Few would have the temerity to condemn this wonderful evolution in all lines of human activity. It has been a beneficent one. In the field of medicine it has meant many adjustments for the profession, and for those needing their services; and it is to this adjustment that I would call your attention for a short time. During this period of rapid advancement and evolution of medicine, there has developed, also, a rapid growth of so-called cults. They have succeeded in many states in securing equal legal standing with the regular profession. Logically, this means that we have not the full confidence of the public, to the extent that the older generation of doctors had. What are some of the reasons? Doctor Phillips, a recent president of the American Medical Association, whose inaugural address I had the pleasure of listening to in Dallas, Texas, in 1926, made this statement: "A gulf had developed between the layman and the doctor on account of the lack of personal touch which had existed between the old family type of physician and his patient." He suggested, and wisely so, that this had to be corrected in the sanctum of the doctor's office, to a greater extent than by any other method. In other words the sick person's confidence in us must be gained by a sincere personal interest in him as a human being, as well as a piece of clinical material. "Treat the patient, and not the disease" was the slogan of the old shrewd doctor, for he realized that each individual was a problem in himself. He did not forget that the body was a unit, presided over by a mind. He had the broad outlook of the humanitarian and the philosopher. He developed versatility and self reliance in the hard school of experience. His armamentarium was small, but he dealt in fundamentals, and not in details. He made good use of the senses with which Nature provided him. He learned to think, and hence he was a leader in his community.

Specialization in medicine is here to stay, but there are some weaknesses in it now, and there is real danger of these increasing unless we take cognizance of them and make an effort to avoid them. The outstanding fault as I see it is the tendency to narrowness in view, a tendency to divide the practice of medicine into water-tight compartments. This is apt to lead to details, rather than essentials and fundamentals. One might quite appropriately compare a narrow view in medicine to that of the politician who cannot see further than his own county or state. He has no great national or international outlook. He is more apt to contract than expand. He will eventually become the local hidebound partisan rather than the statesman and philosopher. His own specialty will become all important. He will feel rather uncomfortable in an atmosphere of more or less general medicine. This attitude of mind may lead to the caste system, which has held India in thraldom for centuries.

In an article of the April 14th issue of the *Journal of the A. M. A.*, C. R. Banden, M.D., dean of the University of Wisconsin Medical School, makes the following statement: "The family practitioner has been, is now, and promises to continue to be the most important agent in applying medical science to individual needs. It has recently been estimated that a good general practitioner is capable of handling 90 per cent of the ills for which patients seek medical advice. To be a competent family practitioner, however, a man must be trained not only to recognize and treat the diseases that fall within this group (90 per cent) but also to recognize the diseases that fall without this group, and to know where to seek proper aid for patients suffering from them." He quotes these percentages from the preliminary report of the Committee on Medical Education for 1927. He also shows how the old preceptorship idea has been recalled and put into force with the fourth-year medical students in Wisconsin University. It is a very stimulating paper and well worth careful perusal. I would like also to quote from another very interesting article in the same issue of the *Journal*, entitled "The Soul of the Clinic" by Peabody, Medical Chief at the Boston City Hospital. The last lines were written the day before he died. He stresses the great importance he gave to his teaching in the general ward, rather than to some department. Some of his remarks were as follows:

> At the present time there are many men who have been associated with American clinics for several years and who have had only the narrowest contact with medicine as a whole. Few of the men who become members of our departments of medicine will become stimulating teachers, and still fewer will do important research work, but almost all can be made first-class clinicians. This, in itself, is a very important contribution, for the majority of the staff are eventually going to practice medicine, and the chief should do his best to see to it that everyone who has been attached to his staff for three or four years has at least made a good start at becoming a high-grade internist, as well as being an expert in some narrow field of medicine. One further point with regard to the general ward: I have spoken of it as the backbone of

the clinic, because it represents general practice, which is the backbone of the medical profession.

Painter says, "Don't let us allow schools to make themselves over into undergraduate research laboratories for the exploitation of scientific research, for there is no room there for the cultivation of the *art* of practice." He says that this has been largely responsible for the urban concentration of doctors, at the expense of the extra-urban territories. The graduate trained in this atmosphere naturally will not settle down in an urban community, for he feels he is unable to make a diagnosis. How can we expect him to do otherwise when he feels that no case has yielded all the information he must have to establish a diagnosis unless a Wassermann has been done, the spinal fluid has been withdrawn and cytological studies made upon it; the sugar tolerance estimated; the basal metabolism tested; a differential blood count made; a series of gastro-intestinal plates read; test-meals given; the gall-bladder visualized; and kidney function determined? So far as the questionnaires sent out by the Commission of Medical Education have gone, they show that in the practice of those to whom these have been submitted, a very high percentage of these cases coming to them for diagnosis and treatment do not fall into the group where such studies are of essential significance. In other words, the majority could be diagnosed by the employment of methods long in use, thoroughly tried out, requiring only the simple technic possessed by all who were trained so long ago as twenty-five years. Over-specialization on the medical school staff breeds over-specialization in the field of practice. One of the chief complaints registered with the Commission was this very thing, viz., that the modern medical school has too many specialists on its teaching force. We should insist on the part of the schools the discouragement of immediate specialization after graduation. He says after the student has secured his medical diploma, there should be a special course of from one to three years after which a degree may be given, similar to the Master's Degree in other fields, that all might know that the specialist was really prepared to practice a specialty.

E. R. Stitt, Rear Admiral, Medical Corps, United States Navy, says: "A few years of a well-balanced general practice not only gives an appreciation of the symptoms which may arise from various regional disturbances, but it affords the young physician an opportunity to determine the branch of medicine which appeals to him, and in which his colleagues, as well as himself, recognize his talent." He further says as follows: "The present trouble with the internist is that he has allowed himself to be forced into a position subordinate to the technician, medical or otherwise, who attempts to make the diagnosis from the chemical, bacteriological, roentgenological, the electrocardiographical, basal metabolism, psychological, or other type of laboratory. We have gotten to the point where an internist does not dare to make a diagnosis until he has heard from all these laboratories and from a host of specialists. He says "Professor Stengel of the University of Pennsylvania demands that a tentative diagnosis be made by the ordinary methods of physical diagnosis with the help of an old-fashioned urinalysis and a simple blood count. Then and only then are the special reports from the various departments brought in and used as a check."

W. J. Mayo says "In so vast a field as medicine I do not feel competent to say just what should be taught the student to-day that he may become a good general practitioner, but I do believe that the function of the medical school is to turn out general practitioners and that the man who desires to take up a speciality should take it up as a graduate subject."

I want to conclude my references with what to my mind was one of the most convincing papers which I read on the subject of the modern tendencies in medical education and practice. It was published in the *Illinois Medical Journal*, June, 1924, and was written by E. H. Ochsner, B.S., M.D., F.A.C.S., of Chicago. He says, "Ultraspecialists of the world have not contributed their full share to the service of medicine; that men with general information and general knowledge have done most of the fundamental worth-while things in the post." "Ultraspecialists have sometimes hindered progress and are responsible for most of the fads in medicine." He says "the unequal distribution of doctors is due to faulty teaching, in which the details and specialties are stressed, and the fundamentals are lost sight of." He also says, "Every medical student should first of all be given the opportunity to become an efficient general practitioner, and then later, after having had five or more years experience in the general practice of medicine, if he shows special fitness and a desire to become a specialist, the postgraduate schools and hospitals should offer the opportunity." He quotes W. J. Mayo as having made the following comment after visiting an eastern clinic of a certain Professor Blank: "I have marveled at this erudition, but I have marveled still more how it was possible for any man to acquire so much useless information, and get so little useful information mixed up with it." The last quotation which I will give from this very same sound paper I feel is especially appropriate and is as follows: "While a certain small number of cases require some refined diagnostic methods, in the great majority of cases such ultrarequirement is not necessary, and often not desirable, because it often tends to confuse rather than clarify."

Let us remember that after all the five well-trained senses are usually indispensable in reaching a correct diagnosis, and let the teacher ever emphasize this point, and do everything in his power to teach the student the proper use of these senses, not to the exclusion of the other diagnostic methods, but with the understanding that the percentage of errors in conclusions based upon a careful examination of a patient by the unaided senses, is much smaller than the percentage of errors in conclusions based exclusively upon almost any of the more modern ultrascientific diagnostic methods." My own experience in general practice for a quarter of a century is in full agreement with the conclusions of the above distinguished men. I do not hesitate to call in some of my colleagues in consultation, whether from a group or an individual, when I feel they can add information and advice along lines in their special fields which will be useful in establishing a diagnosis. Neither do I hesitate to refer patients for treatment to doctors in my home city or abroad who are provided with therapeutic means which I do not possess. I have found such arrangement most profitable and pleasant with my fellow doctors, and also greatly appreciated by the patient. But the point is, no general practitioner should feel at all lost or handicapped in his diagnosis because he has not all the modern paraphernalia for diagnosis. They are absolutely not necessary in the great majority of cases, and, as the authorities quoted have shown, they may only confuse. The great art of acquiring a good history—and it is an art par excellence—and that of a good physical examination, which brings into play the eye, the ear, the nose, the touch, and, to a limited degree, the taste, will always remain the foundation stones for a diagnosis.

I stressed these points in a paper before our Association in 1924 in Bismarck, as I also did in Minot in 1926. I hope I am not transgressing the properties when I tell you that Doctor Royster, of Raleigh, North Carolina, in his recent book on appendicitis, quoted me in the chapter on diagnosis, page 156. The quotation was from the paper I presented at the State Association meeting in Bismarck in 1924, on "Some Prevalent Errors in the Diagnosis of Appendicitis." The clinical observation I made was that a well-localized tender point in the region of McBurney's point was the main factor in clinching the diagnosis, in the acute, as well as in the chronic, form, because it is fundamental that the tender point always, in any part of the body, corresponds with the lesion, while pain is frequently felt at points far removed from the actual lesion. Anyone who cares to read the book, may see how extensively he covers the literature of the world on the subject. My only object in mentioning this fact is to verify what I have previously said, and what others have maintained in the quotations I have given, that the clinical aspect is so important. There was a prominent surgeon in the East who published two volumes on gynecology some years ago and advocated the use of some mechanical device to determine the amount of tenderness over the appendix, and also over the tubes and ovaries. What advantage there was in such a method, when one could determine the same thing by his own touch, I have never been able to understand.

This seems an appropriate place to bring out another angle relative to the use of the many external aids in diagnosis of the present day, and that is how they have increased the cost of medical care of the sick. It is a trite saying now that the rich and the indigent are well taken care of, but that the average man or woman is feeling the burden so much that they must often go without adequate attention. This factor is so much in the minds of the medical and lay world at this time that recently committees have been appointed from the profession of medicine, institutions of various kinds, economists, and the public to formulate a five-year program in which studies will be systematically pursued, to get at all the facts. The personnel of the committees include the best minds of this country, and their findings will be awaited with great interest.

These added paraphernalia also have played much into the hands of the various cultists, as well, for many of their offices are veritable magazines of machines for diagnosing, but more particularly for therapy. Why should it not be so if the public is educated by the regular profession to believe that machines are so necessary for diagnosing and treating. It is difficult for them to discriminate why one doctor should not be as capable as another in the application of the machine. We have no prerogative to the title of doctor, you know, in this jazz age. The Electronic Theory of Abrams, with his complicated machine for its application to relieve human ills, is still fresh in our minds. His disciples were not all from the ranks of the irregulars. You and I know that not a few of our profession fell for it. I believe many of those men were sincere. Some, of course, found in it a ready means of increasing their incomes. The sincere ones were men who forgot that medicine was based upon the fundamental sciences of physiology, anatomy, bacteriology, chemistry, etc. They became lost in a mass of details and tinsel superficialities, and were ready to grasp at any will-o'-the-wisp. While on my way to a medical meeting some years ago I fell into conversation with another doctor, and he remarked that he did not dare to contemplate the rapid advancements in medicine for the past two or three decades because it made him feel so helpless. Now that was most uncomfortable for the poor man, and it was tragic because it was unnecessary. He got so confused because he had lost his sense of perspective of the fundamentals, and became lost in a mass of details. Consequently, he was unable to think constructively.

Is it not possible that the tremendous advances, so called, have been more apparent than real? The great fundamentals in the basic sciences have not been the child of two or three decades past but have been worked out by great constructive thinkers of the past century or two. To the great Italian schools belongs the credit for laying the foundation of anatomy. When physiology is thought of, the mind reverts to John Hunter. Bacteriology is forever linked with the name of Pasteur; asepsis and antisepsis, or the application of the discovery of Pasteur, associates itself with the great Lister, at whose centenary celebration I had the pleasure of taking a humble part at the American College of Surgeons in Detroit last fall. To whom belongs the greater honor, the fathers of these great thoughts brought to fruition and handed down to humanity, or the men who worked out the details of the application? They were the Lindbergs, or "Lone Eagles," of their day who worked out new paths in unexplored fields, and who furnished inspiration to the generations of the future. In a discussion some time ago at one of our medical meetings the value of the specific-gravity reading of urine came up in connection with prostate surgery. One man said he had recently the opportunity of spending some time in the clinic of a genito-urinary surgeon, who made the statement that he no longer paid any attention to the specific gravity as an index for the safety of removal of a prostate, but depended upon a blood chemistry examination. That doctor was asked what he thought or what he said when such a statement was made. His reply was "What was there for me to say, he was a specialist?" In other words, he was willing to throw overboard such a valuable and long-tried prognostic measure at the mere say-so of one who, perhaps, was more of an egotist than a balanced surgeon.

We all know what a vogue the leucocyte count had, and still has, in some minds as a diagnostic and prognostic index in such a case as acute appendicitis, and yet it is a truism that in many of the very worst cases, from a prognostic and diagnostic point of view, the count is more than useless, if depended upon, other than a check in the more obscure case. Perhaps where the laboratory method of diagnosis has been most conspicuously a failure, is with the great army of sufferers who have a multiplicity of symptoms without any organic background. I have known some instances where the thyroid has been removed in nervous women where, clinically, no goiter could be palpated, and where all classical symptoms of exophthalmic goiter were absent, but where the diagnosis was hung purely on an increase of the metabolic rate. In two cases I know a marked exophthalmic goiter developed some weeks or months afterward where there was none before the operation. Is it too much to assume that the shock and trauma in a poorly balanced nervous system might not have precipitated a true exophthalmic goiter? The metabolic rate might easily have been raised many points by the increased excitability of the nervous system and consequent increase of the circulation and respiration occasioned by examination in a nervous person, even where precaution had been taken to eliminate the element of apprehension and instability. It is a well-known fact now that the blood pressure in those types of people can be rapidly raised by nervous tension.

The handling of the nervous, neurasthenic, psychasthenic patient, or whatever term you wish to designate them by, has done more to undermine the confidence in the regular practitioner and boost the stock of the irregular than any other one thing. We have tried much in the past, and have tried in some respects in the present, to cure them by taking some part of the machinery out, and only made them worse. They would keep going the rounds, till all the odds and ends, which were lying around, had been removed. We have drugged them to the saturation point, with indifferent success. But we forgot to put something into their heads by educating them with sound advice and friendly counsel, which would often remove a mental kink which was a veritable thorn in the flesh, around which their whole being revolved, and which took the joy out of life. A thorough physical examination is very necessary in these cases, not only because some organic trouble may be overlooked, but because it has a good psychological effect. I do not know of any class of patients who are more appreciative than those same nervous people when relieved of their chronic nervous and mental unbalance. It requires patience, intuition, understanding, and kindness. The restoration of health by the removal of an appendix or gall-bladder is a simple matter when compared with the restoration of a healthy mind in a healthy body of one of these poor sufferers. Many of them are intelligent fine people, capable of and anxious to co-operate. The plain "nut" amongst them is the least to be pitied, and the worst to co-operate with you, for he really rather enjoys being sick.

Before concluding, I will, at the expense of boring you, cite one more case to show the fallacy of attaching too much importance to mechanical diagnosis at the expense of clinical diagnosis based on the human equation, some little common sense, I hope, and on experience over many years with similar types of cases. Some two years ago I was called to see a man about sixty-five years old, heavily built, a laborer. His story was that some two months before, after a period of enforced idleness, he began work of a rather laborious nature. He went along for a short time when he became faint and dizzy and almost breathless. He was taken to a doctor who referred him to a hospital. He was seen by a heart specialist, who took an electrocardiograph reading. He was told he had heart block, that he must remain steadily in bed, as a sudden effort to arise or walk might cause his death any moment. I asked him if he obeyed the instructions carefully. He said yes, except when he got too cold he would take his life in his hands and get up to close the window. He remained in the hospital several weeks, but felt he was no better and asked to be allowed to go home, which permission was granted, but he was told to remain in bed, and call his home doctor. He remained in bed a couple of weeks at home when he called me. I found his heart extremely irregular, with auricular flutter. There was no evidence of decompensation, and, according to his story, there had not been. The urine was normal. He was very nervous and apprehensive, had very hot flashes, and had rather poor sleep. I gave him assurance that I had known many similar cases to his live for many years comfortably with some slight restrictions. I gave him a mixture of bromide and digitalis, and told him to walk out some each day, gradually increasing the length of his walk, and not to become alarmed if he felt dizzy, but to sit down a bit and then go on. In ten days he came to the office, climbing a long stair. The heart was very irregular, but no worse, even some better. He showed up once a week for three weeks, then I saw no more of him for some months when he came to settle a small account. He told me he made it working in a paving crew in the city. The heart was still irregular, but much improved. I saw him a couple of months ago, incidentally, as I was called to see his grandchild. I was anxious to know how his pump was holding up, and asked permission to examine it, and to my surprise it was working away with hardly a miss. He had been working whenever he could get the chance.

As I said before, it is not my intention to condemn specialism, but rather to call attention to some inherent weaknesses which will harm our profession and undermine the confidence of the public unless guarded against. The group, organized or associated, is perhaps the best medium for the practice of specialism. How successful it may be will be due, of course, to the leadership and personnel. I know many clinics that are doing fine work. They all have a backbone of men who have gone through years of general practice as individuals. They have not lost their perspective, or balance, and they are good mediums for the development of young men. They have had steady growth and have not been thrown hurriedly together, but I fear for an assembled group of specialists who lack the background of general practice, as the above mentioned have had. To sum up, I would say:

First, the object of medical schools should be to train men for general practice.

Second, after a doctor has been in general practice, has developed a broad perspective, and wishes to confine his practice to a limited field, he should receive a sufficient special training in a postgraduate atmosphere.

Third, the well-taken history and clinical examination with a comparatively small amount of apparatuses are the essentials for diagnosis.

Fourth, a comparatively small percentage of cases will require special training, and more complicated and expensive appartuses for diagnosing and treating disease.

Fifth, we should keep the mind receptive to the progress being made, from time to time, in the science of medicine, but we should use our powers of analysis and logic gained by experience before we accept them whole. This will develop a stability of medical thoughts and attitude and prevent fads.

Sixth, the sick person should always be treated as a human being in distress, who needs our understanding, and sympathy, and advice, as well as our skill.

Seventh, there are various channels through which we may educate the public, but the privacy of our offices should always remain the sanctum where we may gain the confidence of the public in the integrity and the sincerity of our profession.

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C. F. Painter: "Medical Education," Boston, M. and S. J., 1927, cxxvii, 663-666.

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C. R. Banden, Dean of the University of Wisconsin, Med. School: Jour. of the A. M. A., April 14, 1927.

E. H. Oschner, B.S., M.D., F.A.C.S., of Chicago: Illinois Medical Journal, June, 1924.

BOOK NOTICES

The Surgical Clinics of North America. (Issued serially, one number every other month.) Volume 7, Number 5, (Pacific Coast Surgical Association Number, October, 1927.) 266 pages with 132 illustrations. Per Clinic year (February, 1927, to December, 1927.) Paper, $12.00; cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company.

This number is dedicated to Lord Lister. The first article is on "Lord Lister and the Renaissance of Surgery" by Dr. E. L. Gilcreest. The clinics and clinical articles are by fellows of the Pacific Coast Surgical Association. A series of seven consecutive cases of cancer of the rectum is presented by Dr. R. C. Coffey, of Portland, to show how the technic of his radical operation must be modified in minor points on account of variations in the extent and location of the lesion. Dr. Coffey's work on cancer of the rectum should be known to all surgeons, and this short presentation of cases is worth reading in connection with the study of his more formal articles.

A short series of cases of cancer of the colon is presented by Drs. Mason, Dwyer and Palmer, of Seattle, and discussed as to diagnosis, roentgenography, and surgical treatment.

Several cases of intestinal obstruction of unusual causes are presented by various clinicians. Two cases were due to congenital atresia of the jejunum, one to appendicitis, and one to healed tuberculous enteritis.

Dr. Frank Hinman's discussion of the significance of pain in the differential diagnosis of lesions of the kidney and ureter is well worth study.

Four of the clinicians discuss thyroid surgery. Dr. J. B. McNerthney describes technical points in goiter surgery and presents cases of sarcoma and carcinoma of the thyroid. Drs. A. A. Matthews and C. T. Sturgeon present cases of exophthalmic goiter. Dr. S. L. Caldbick of Everett reports an interesting series of five cases of hyperthyroidism, emphasizing the danger of long administration of Lugol's solution, and advocating complete thyroidectomy in some of the apparently inoperable cases. The two patients reported, on whom this was done, have recovered very well, and now take small doses of thyroid extract daily. This idea is worthy of thought.

An orthopedic clinic, three cases, is presented by Dr. R. B. Dillehunt, of Portland.

Dr. C. D. Lockwood, of Pasadena, gives an excellent clinic on the surgical treatment of pulmonary tuberculosis and bronchiectasis. He feels that two groups of cases of pulmonary tuberculosis are not amenable to the regular sanatorium treatment and should be considered surgical cases from the onset. Group I, the pneumonic type with early consolidation of lung areas near the periphery, particularly in the upper lobe; Group II, a group characterized by early and persistent hemoptysis. In the first group he advocates early thoracoplasty. In the second group he does phrenicotomy, or avulsion of the phrenic nerve, followed later, if necessary, by resection of the upper five or six ribs.

—T. H. Sweetser, M.D.

Lectures on the Biologic Aspects of Colloid and Physiologic Chemistry. A series of lectures given at the Mayo Foundation and the Universities of Wisconsin, Minnesota, Iowa, Washington (St. Louis), and the Des Moines Academy of Medicine, Iowa. 1925-26. 12-mo. of 244 pages, illustrated. Philadelphia and London: W. B. Saunders Company. Cloth, $2.50 net.

This volume contains essays on interesting and important phases of colloidal, physical, and physiologic chemistry, which should be of real value to a physician in forming clearer concepts of vital phenomena.

It contains articles by Robert A. Milliken, Martin H. Fischer, Robert Chambers, Ross A. Gortner, E. Franklin Burton, and William T. Bovie.

—L. M. Daniels, M.D.

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Glaspel, G. W.	Grafton
Glasscock, T. J.	Finley
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Goss, E. L.	Carrington
Grace, J. B.	Bryant, S. D.
Graham, J. D.	Devils Lake
Grangaard, H. O.	Ryder
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Gunderman, H. R.	Monango
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Halliday, D. J.	Kenmare
Halverson, H. L.	Des Lacs
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Hamilton, J. S.	Bathgate
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Hanson, G. C.	Minot
Haraldson, O. O.	Minot
Haugen, Hans	Fargo
Hayhurst, J. O.	Rolette
Haynes, Geo. H.	Lisbon
Healy, H. H.	Grand Forks
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Heimark, J. J.	Blue Earth, Minn.
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Hillis, S. J.	Berthold
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Hubbard, F. G.	Cogswell
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Kolb, F, K,	Granville

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Landry, L. H.	Walhalla
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Lang, F. F.	Montpelier
Larson, E. J.	Underwood
Larson, G. A.	Fargo
Larson, L. W.	Bismarck
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Law, I. M.	Halliday
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Leedahl, O. S.	Stanley
Lees, H. D.	Minneapolis
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Lemieux, D.	Bowman
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Lund, A. B.	Leeds
Lyle, W. D.	Havana
Lynde, Roy	Ellendale
Lyons, W. M.	Sentinel Butte
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Nicholson, E. G.	Lawton
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O'Brien, T.	Wahpeton
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Oftedal, Arne	Fargo
Oftedal, Axel	Fargo
Oftedal, Trygve	Fargo
Oftedal, Sverre	Fargo
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Patterson, T. C.	Lisbon
Peake, F.	Jamestown
Peake, F. Margaret	Grand Forks
Pence, J. R.	Minot
Pence, R. W.	Minot
Perkins, Geo. A.	Dickinson
Pierce, W. B.	Bismarck
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Platou, C. A.	Litchville
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Ray, R. H.	Garrison
Ribble, George B.	La Moure
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Rice, P. F.	Solen
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Rindlaub, John H.	Fargo
Rindlaub, M. P.	Fargo
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Rystad, O. H.	Grand Forks
Sand, Olaf	Fargo
Sarchett, G. A.	New England
Sasse, E. G.	Lidgerwood
Savre, M. T.	Northwood
Schneider, J. E.	Bowman
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Schumacher, N. W.	Hettinger
Scott, W. B.	Ray
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Seibel, J. J.	Harvey
Sihler, W. F.	Devils Lake
Sinamark, A.	Hibbing, Minn.
Skelsey, A. W.	Fargo
Skovholt, H. T.	Williston
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Smith, Clinton	Devils Lake
Smith, J. A.	Noonan
Smith, J. C.	Thompson
Smith, L. G.	Mandan
Smith, Oscar	Killdeer
Smyth, F. R.	Bismarck
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Sorkness, Jos.	Jamestown
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Spear, A. E.	Belfield
Spicer, C. E.	Valley City
Spielman, Geo. H.	Mandan
Stackhouse, C. E.	Bismarck
Steeves, Elmer O.	Rugby
Stickelberger, Josephine	Oberon
Stolinsky, A.	Sheldon
Stone, E. C.	Minot
Strauss, F. B.	Bismarck
Stromberg, G. E.	Langdon
Stucke, Agnes	Garrison
Suter, J. C.	Grafton
Swenson, A. W.	Van Nuys, Cal.
Taintor, Rolfe	Fargo
*Taylor, J. D.	Grand Forks
Thane, Benj.	Wahpeton
Thelen, W. P.	Wilton
Thompson, A. M.,	Abercrombie
Thompson, A. Y.	Larimore
Thompson, R. C.	Wilton
Thorgimsen, G. G.,	Grand Fks.
Timm, J. F.	Makoti
Todd, Gilbert	Medina
Tompkins, C. R.	Grafton
Tronnes, N.	Fargo
Truscott, J. R.	Binford
Van de Erve, H.	Carrington
Van Houten, J.	Valley City
Verret, B. D.	Rolla
Vigeland, J. G.	Brinsmade
Vinje, Syver	Hillsboro
Voss, Carl	Hettinger
Wagar, W. D.	Michigan
Waldren, H. M.	Drayton
Waldren, H. M., Jr.	Drayton
Waldren, G. A.	Drayton
Waldschmidt, R. H.	Bismarck
Wanner, W. B.	Wimbledon
Watson, E. M.	Fargo
Weed, F. E.	Park River
Wendell, W. G.	Marmarth
Weible, R. E.	Fargo
Welch, W. H.	Larimore
Welker, A. J.	Max
Westervelt, A. E.	Bowdon
Westley, M. D.	Cooperstown
*Wheeler, H. M.	Grand Forks
Wheelon, F. E.	Minot
Whittemore, Arthur A.	Bismarck
Wicklund, C. A.	Wildrose
Wicks, F. L.	Valley City
Widmeyer, J. P.	Rolla
Williamson, Geo. M.	Grand F'ks
Winn, W. R.	Jamestown
Wink, Helen K.	Jamestown
Witherstine, W. H.	Grand Forks
Wolverton, W. C.	Linton
Wood, W. W.	Jamestown
Woodward, F. O.	Jamestown
Woutat, H. G.	Grand Forks
Wylie, A. R. T.	Grafton
Wright, W. A.	Grenora
Yeomans, T. N.	Minot
Zimmerman, S A.	Valley City

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The Hennepin County Medical Society
The Soo Railway Surgical Association
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TALKING MOVIES

We are told that we are going to be overwhelmed with the new movie idea, the talking movies. But these will have to be more advanced and more highly developed than at the present time before they are generally accepted.

It has been said that all of the plays now in this country and other countries will probably be absorbed and made into talking movies. But those of us who have heard the present talking movies will hardly be moved to attend many of these underproductions. It has also been suggested that gradually the real actor will lose his place as an actor and he will probably decline, as he has been ordered to, to permit himself to join one of these abortive affairs.

COLOR FILMS OF OPERATIONS TO REPLACE SURGERY BOOKS

Dr. Franklin Martin, of Chicago, director general and president-elect of the American College of Surgeons and who is also an active officer in the Gorgas Memorial Fund, has recently been in Paris and has arranged for the filming of the most important operations for use in world-wide surgical archives. And he thinks the doctors of the future will have a library of medical films instead of shelves of dusty, obsolete volumes. He also thinks a man may perfect himself in the intricacies of a mastoid operation or anything else that a delicate operation must be given and that a surgeon may, by looking at a picture, avoid the reading of heavy material which is usually looked upon as more or less valueless, too wordy, too prosy, and too long-drawn-out. Of course this does not mean that Paris is going to furnish all the surgeons in Minnesota and the Northwest with films, but a lot of surgeons will do the filming themselves, as they have done for years. Most of us will remember Dr. Robert E. Farr's original work in filming many of his operations, so it is not new, or conceived entirely in Paris, but will be received here after it has the proper foundations.

Here, as elsewhere, the work has already begun and will excite a great deal of admiration and attention unless they overdo it. All these films will be looked over by a committee of the American College of Surgeons, and a dozen films of this highly technical nature have arrived and two hundred more are under production in the United States now. What further wonders may we expect in the surgical and medical world?

A NEW SERUM FOR TETANY

Dr. Adolph Hanson, of Faribault, Minnesota, has found that a hormone of the parathyroid glands of an ox will cure tetany and he has called it paroidin, and he believes that it will have a marked effect on convulsions or cure tetany. Evidently the Society of Internal Medicine men of Minnesota agree with him, because they offered a prize of $250 for a discovery and this appealed to them as probably the most far-reaching they had had presented to them for consideration.

The parathyroid gland, as we know, is a very small gland, but there are four of them located in the neck of each individual, and probably these glands are larger in the ox. .They have demonstrated the foundation of a hormone which he believes will be of value in the treatment of tuberculosis, particularly in tubercular sinuses. The Northwestern Health Journal believes that it may restore general metabolism because the calcium content of the blood is increased, thereby strengthening the healing power of the body and restoring the body tone. The newspapers have gone on to say that it is useful in ulcers of the stomach and leg, and inflammation of the bladder and of the joints. This widespread plan of treatment we think may be disputed by many.

Doctor Hanson was a surgeon on the battle-fronts of France during the World War and has practiced in Faribault since 1912. He graduated from the Northwestern Medical School in Chicago and he has practiced in Red Wing. He was house surgeon in the Seattle City Hospital, and the Evacuation Hospitals at Chauteau Thierry, Aisne-Marne, St. Mihiel and Argonne fronts, and also served as chief neurosurgeon. During this time, while he was in the war, he invented an instrument for the brain surgeon, a dual separator and bone elevator for craniotomy. He has written monographs on head injuries and spinal wounds and also has written sections of neurosurgery in the work of the medical department of the U. S. Army during the World War. May he be continuously successful; may he have introduced into the world of therapeutics a remedy that is of real value.

RADIUM POISONING

We frankly admit that we know very little about the effect of radium, but there are many experts who know all about it, or think they do, yet in New Jersey five women who have been the victims of radio poisoning are suing, or have sued, for $250,000 each, because when they touched their tongues to the tips of brushes with which they were applying radium to manufactured articles, they contracted what they supposed was an incurable disease and they held the company responsible. Why this fact had not been discovered before is rather remarkable. The public's denunciation of the defendant corporation undoubtedly had a great deal of weight and created much sympathy with the suffering radium appliers. But with the entrance of a federal judge into the case, one who comes under the spell of the term, "righteous and honorable judge," and his judgment, not officially, but as a private citizen, carried the largest weight, and the formal legal restraints were cut through to reach common ground. Judge William Clark recommended the following terms upon which the defendant company has settled: Instead of awarding $250,000 to each individual, they are each to receive $10,000 in cash, free and clear; all past medical expenses, said to have averaged $2,000 in each case; a pension of $600 a year during their disability, a capital value of $10,000; all future medical expenses during disability, a capital value of $10,000; counsel fees of $15,000 to cover all cases; and legal disbursements totaling about $4,500 for all cases. Doubtless this will turn out much better for the injured women than any other form of settlement, because they know they will be taken care of and looked after according to the ruling of the Court, which is generous and responsible. It is quite likely, had the case been carried through its original trial proposition, that someone would have ingeniously steered it in another direction and the women might not have gotten anything.

Evidently it is the duty of someone who is familiar with radium to instruct his fellow-men in its use, its liabilities, its poisonous effects, and its therapeutic value. We all assume that it is a dangerous chemical and particularly when not applied with some degree of consideration. We all assume, too, that very few women would like to apply for the jobs of these other women unless they could dip their brushes in a pot of water instead of wetting the brushes with their lips.

May we have more judges like Judge William Clark, and may we have scores of attorneys with his good judgment; and may we have some medical men with the appreciation of radium!

CARING FOR THE DEPRESSED

One is sometimes overwhelmed when he picks up a newspaper to find that a mother has drowned her children and herself. In the particular case in mind the youngest child was four months old. It would be reasonable to suspect that her depression came after the birth of her last child, which is not infrequent, following the child-bearing period. Yet a number of comments arise as to the possible cause of this woman's desperate deed. One is that perhaps her husband had not been fair to her, nor perhaps had he recognized her depression. Why she was unhappy, was the husband's business to determine, and if possible remove the cause.

The other side of the question suggests that the doctor did not recognize her depressive state of mind, or perhaps he treated it as something very immaterial or inconsequential. Just as the writer hears from patients many times that doctors who see them tell them not to worry, not to keep thinking about themselves all the time, to "forget it." A very easy remark to make, but there is no telling the consequences of such advice to a depressed person, except when the depressed one, whoever she may be and from whatever cause the depression, reaches the point where it all ends, as in this case. The doctor is not only doing the patient a great injustice, but is doing himself an injustice, because he either has not or will not recognize the depression.

The editor has called attention to this point, and it may be an old and time-worn subject, but it is a very vital one in the minds of the neuropsychiatrists that people in this frame of mind must not be treated with indifference. The writer cannot urge too strongly upon the profession the necessity of watching people who have been or are passing through a confinement or who have trouble in the family, when he finds them depressed. It is necessary for the doctor in charge to stick by them until the depression is gone. It will take a good many years' training in medical school and in practice to cull the art and study the individual more carefully before one becomes sufficiently proficient in medicine to keep a sharp eye on the depressed.

Of course, the number of cases of suicide over the country are many, and the causes necessarily come under questionable headings. Are they psychiatric cases, or people who are tired of living and anxious to get out of the way and escape the burdens that life involves; or are they sick people, deficient people sometimes? Suicide is more likely to occur in a high-strung, nervous individual from some angle than it is in a defective case. We do not refer necessarily to an outwardly high-strung and nervous person, but to temperamental or sentimental, you might say.

Again we get back to the individualistic point of view. Do we know the individuals we are taking care of, and do we analyze them sufficiently as to how they feel. Of course, no one knows how another feels unless he has himself been through a depression. And not very often does he profit by his own experience. There are any number of people who have pathological conditions of heart, kidneys, or blood vessels, who develop depression from physiological causes and become greatly depressed. Some of these may be more or less helped and with that the depression passes.

The chief aim and object of this note is to call attention to the fact that people do get depressed and these people must not be slightingly treated, that they must be sympathetically treated as well as scientifically analyzed, because it is the individual himself who suffers, and it is not altogether a state of mind, because it may be a state of pathology or a state of misdirection of functions. Why or how we cannot always explain.

But when a women is definitely depressed she needs the most careful scrutiny even if she be hospitalized. Doubtless many lives have been saved by recognizing this condition and putting the patient in bed for rest. Try it on some of your depressed patients even if they look pretty well, and note the improvement when they get rested. For of all the treatment in scientific medicine rest is of prime importance.

Poverty, unhappiness, and the burden of too much care and trouble of various sorts are causes that result in a state of depression, and these same people when depressed are most apt to be brilliant in scheming suicide or murder. Of course, some of them cannot be prevented because we do not know what is going on all of the time in the mind of another, but the large majority of these people could be saved if they were more carefully investigated. But who is going to do it, except the doctor? Surely a hard-working or laboring man does not realize what all these trials and troubles of the home and family bring to the wife; he does not always stop and analyze the situation, or he does not know enough on the subject, but someone should know, and if there is anything in our welfare work and nursing associations someone ought to realize and recognize and prevent tragedies such as this, which occur too often.

OUR USUAL VACATION

The editor has been sometimes insulted, sometimes ridiculed, and sometimes thoroughly misunderstood in regard to his ideas on vacations for doctors. As our readers will probably remember, some time ago we suggested that the only way to take a vacation was to go to Chicago or New York, get a room in the fifteenth floor of a desirable hotel (and that may include a reduction or increase of expenses, as you please), and there go to bed; get up when he pleases, or when the spirit moves him, go to a good theatrical play, and then sleep late the next morning and have his luncheon and breakfast at the same hour,—rather than go out to a summer resort and fight the elements in nature, a high wind that blows his cabin over or his tent down, molested by the fleas that invade the country and the many other crawling things of an animal or mechanical nature.

One implicit warning to be given to all vacationists is to avoid hard work and to seek a little much-needed rest, even if one does get an occasional mosquito bite (which in Minnesota is sometimes very vicious, but not of long standing), or attract some other out-of-door affliction. Be careful of all these things if you are going to make your vacation pay, in spite of hard work, insect bites, and other discomforts. But the average tourist goes to his vacation and works harder than he does at his regular profession. Why? Because, first of all, he enjoys the change of scene, thought, and occupation,—the greatest benefit he has. But none of these things for the writer. He will stick to the hotel, where he probably will not contract ptomaine poisoning, intestinal influenza, or other undesirable ailments.

Then, too, make your vacation time fit the days you have to spend rather than hurry through a week which is of no special good unless you are resting most of the time. In lieu of all this the editor would rather go to a hospital and be secluded in a room and with the black sign out on the door "no visitors allowed." There he might read and think and possibly write editorials, but the latter is doubtful. Go off on your vacations, you spendthrifts, and disregard all the discomforts of an unusual life! Some vacationists do not recover from their outings for months. Why not revive the old vacation spirit—the spirit of loiter and loaf which leads to unforgetable enjoyment.

P. S.—If you do not like this advice stay at home where you will be comfortable.

NEWS ITEMS

Dr. J. B. Grace has moved from Zeeland, N. D., to Bryant, S. D.

Dr. O. C. Gaebe has moved from New Salem, N. D., to Carpio, N. D.

Dr. A. B. Hawes has moved from Gayville, S. D., to Frankfort, S. D.

Dr. W. B. Doms, of Woodstock, Minn., died last month at the age of 70.

Dr. Egil Boeckmann, of St. Paul, has gone to Europe for special study.

Dr. O. A. Graebner has moved from Cold Spring, Minn., to Mitchell, S. D.

Dr. J. D. Graham has moved from Starkweather, N. D., to Devils Lake, N. D.

Dr. A. A. Zierold, of Minneapolis, has gone to Europe to spend several months in special study.

Dr. C. E. Palmer, of Fairmont, Minn., was married on June 30 to Miss Margaret Michaelson, of Hibbing, Minn.

Dr. Frank Borglum, of the Veterans' Hospital, at Fort Snelling, has been transferred to similar work at Fort Bayard, N. M.

Dr. L. B. Vaughan, of Hurley, S. D., has returned to his practice after a year's absence spent in postgraduate work in Chicago.

The registration in two summer-school courses at the University of Minnesota is interesting. The registration in Public Health Nursing was 81 students from thirteen states; in School Administration, fifteen students.

Of the 380 persons who have taken treatment under the auspices of the Hennepin County Tuberculosis Association in the past three years and were diagnosed "arrested cases," 250 have been given regular employment by Hennepin County business men.

The Parents' and Teachers' Associations of Minnesota have joined in a movement headed by the Minnesota Public Health Association to render all kindergarten and first-grade children 100 per cent healthy. The necessary funds to carry on the work will be supplied by the Public Health Association.

At the annual meeting of the South Dakota State Medical Association, held last week at Hot Springs, S. D., the following officers were elected: President, Dr. N. K. Hopkins, Arlington; first vice-president, Dr. L. N. Grosvenor, Huron; second vice-president, Dr. Percy D. Peabody, Webster; third vice-president, Dr. W. A. Bates, Aberdeen; secretary-treasurer, Dr. J. F. D. Cook, Langford (re-elected for three years); delegate to the A. M. A., Dr. T. F. Riggs, Pierre; alternate delegate to the A. M. A., Dr. S. M. Hohf, Yankton; councilors, Dr. H. R. Kenastone, Bonesteel; Dr. A. E. Bostrom, DeSmet; Dr. Charles Flett, Milbank (re-elected for three years). Place of next (1929) meeting, Mitchell.

Northwestern District Medical Society of North Dakota

The last regular meeting of the Northwestern District Medical Society was held at Saint Joseph's Hospital, Minot, August 1, 1928.

Dr. A. Carr reported a case of tetanus and Dr. Yeomens reported two cases of meningitis.

The following members were present: Doctors A. Carr, Devine, Fardy, Hanson, Haroldson, Johns, McCannel, J. R. Pence, Ransom, Wheelon, and

Yeomens. And the following guests were present: Doctors Gates, McLaughlin, Owenson, Rowe, and Pearson.

J. R. Pence, M.D.
Secretary

Northern Minnesota Medical Association Meeting at Fergus Falls, on Monday and Tuesday, August 20 and 21

Monday, August 20

8:30 a. m.—Registration at the Chippewa Club Rooms.

9:30 a. m.—Scientific Program, Assembly Hall, Chippewa Club.

Differential Diagnosis of Intestinal Obstruction, Dr. O. N. Nelson, Battle Lake.

Heart Symposium—

(a) Classification, Dr. E. T. Bell, Minneapolis.

(b) Diagnosis and Treatment:

1. Infectious Type, Dr. E. L. Tuohy, Duluth.
2. Non-infectious Type, Dr. H. L. Ulrich, Minneapolis.

(c) Roentgenologic Diagnosis, Dr. Leo. G. Rigler, Minneapolis

Noon Intermission

Complimentary Luncheon at St. Luke's Hospital

1:30 p. m.—Scientific Program, Assembly Hall, State Hospital.

Psychiatry Clinic, Dr. W. L. Patterson and Staff.

Early Human Embryology, Dr. F. C. Schuldt, St. Paul.

The Treatment of Fractures, Dr. A. E. Wilcox, Minneapolis.

Surgical Clinic, Dr. W. J. Mayo, Rochester.

7:00 p. m.—Banquet and Program at State Hospital.

Toastmaster, Dr. C. B. Wright, Minneapolis.

Address, Dr. W. J. Mayo, Rochester.

Presidential Address, Dr. F. J. Hirschboeck, Duluth.

Dancing.

8:30 p. m.—General Public Meeting.

Address, Dr. L. B. Wilson, Rochester.

Tuesday, August 21

8:30 a. m.—Injection Treatment of Varicose Veins, Dr. A. F. Bratrud, Minneapolis,

A Neurologic Discussion, Dr. E. M. Hammes, St. Paul.

Conservative Treatment in Lesions of the Stomach and Duodenum, Dr. D. C. Balfour, Rochester.

Upper Respiratory Infections in Infancy and Childhood, Dr. F. C. Rodda, Minneapolis.

Present Viewpoints on Essential Hypertension, Dr. G. E. Brown, Rochester.

Newer Drugs in the Treatment of Heart Disease, Dr. F. H. K. Schaaf, Minneapolis.

Diagnostic Dialogue, Dr. A. T. Mann, Minneapolis; Dr. S. H. Boyer, Duluth.

1:00 p. m.—Luncheon given by Park Region Medical Society.

The afternoon will be given over to golf, drives to the lakes and a visit through the State Hospital. Excellent entertainment has been provided for the ladies, as this is their popular meeting of the year.

M. O. Oppegaard, M.D.
Secretary

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PUBLISHER'S DEPARTMENT

PHYSICIANS AND HOSPITALS SUPPLY CO., INC.

At the top of our second cover page will be found a picture of one of the most attractive store fronts in Minneapolis, and on the two sides of the picture is a partial list of the very large line of the things attractive to physicians and surgeons carried by this house. This list of fifteen or twenty departments does not begin to cover all the attractive things to be seen in the storerooms and showcases within, nor can they see how hearty a welcome the visitors will receive within. The managers of this Company, their salesmen, and their clerks have a genuine pride in their work and their goods, and they really welcome the medical man who pays them the compliment of a visit, if merely only to see the things a professional man is interested in.

No doubt many physicians will be in Minneapolis during the State Fair next month who would enjoy a visit to those showrooms quite as much as they would enjoy a visit to any exhibit made at the Fair; and we suggest to all such visitors to the Twin Cities in September (1 to 8 inclusive) that a visit to the house above named will be well worth while and enjoyable. This house is located at 412-414-416 South Sixth Street, which is not far from any of the leading hotels.

A WELL ORGANIZED NURSES' REGISTRY

The Twin City Nurses' Registry (at 2213 Chicago Avenue, Telephone So. 4815) is endeavoring to meet the needs of physicians seeking any kind of nurse, registered, graduate, undergraduate, practical, infant, for family, hospital or office.

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Physicians are invited to confer with the Registry by phone in regard to their present or prospective needs.

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INCREASED USE OF NUJOL FOR EXTERNAL PURPOSES

Where once hospitals used only olive oil, cottonseed oil, or the cheapest mineral oil they could buy for external use on babies, the tendency now is to use the finest grade of mineral oil for all external, as well as internal, purposes.

In many maternity and baby hospitals they are using Nujol on a baby from the time it is born. Instead of the old olive oil cleansing, the baby is thoroughly oiled with Nujol at birth. All premature babies, too, are cleaned with Nujol until they become normal size and can be bathed regularly. Even then the daily bath is followed by an oil rub with Nujol to prevent chapping.

This same mineral oil has proved to be a very efficient treatment for skin rashes, scalp diseases, etc. It helps relieve irritation, itching, and dryness, and has a soothing, healing effect. In fact, Nujol is coming more and more into general use as an external rub for babies. Pediatricians are recommending it to young mothers in place of the usual talcum powder. They advise using it after every bath, after exposure to wind and cold, and on any other occasions when there is danger of chapping or chafing. It is far better than powder, which is so drying.

There are certain skin conditions, in fact, which powder not only does not help, but actually aggravates. When a baby's buttocks are red and sore, powder should not be used. Instead the sore area, especially down in the creases and folds, should be carefully wiped with a pure mineral oil like Nujol.

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That is an interesting story, told on another page, of how the English pediatrists prescribed double doses of Dextri-Maltose, and no nutritional disturbances came from it. For over three years it was used in England as a carbohydrate addition to milk, the feeding being six level tablespoonfuls, as it was also in America, in twenty-four hours. An English pediatrist discovered the fact that an English tablespoonful means ½ oz. and the American ¼ oz., thus making the American feeding one-half the English feeding.

The above interesting facts clearly show the measure of safety there is in Mead's Dextri-Maltose in infant feeding.

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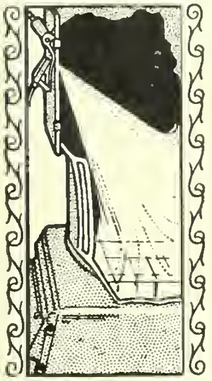
Thirty years ago there was founded in Minneapolis a hospital which has grown to a capacity of two hundred and fifty beds, and to-day begins a new development which promises a still greater work for the Swedish Hospital of Minneapolis. Last week ground was broken for a new four-story building with a capacity of 100 beds, but with a foundation that will carry eight additional stories. The new unit faces the beautiful Elliot Park and is so planned as to become an integral part of the older buildings.

Eventually the entire block will be covered, and the Swedish Hospital will be one of the largest hospital structures in the city.

The card of the Hospital, which appears on another page, shows that its work is done by a Special Staff of 35 physicians, a Consulting Staff of 2 physicians, and a General Staff of 22 physicians, all of whom are men of the highest standing in the medical profession of Minneapolis. Its Training School for Nurses and its Laboratories are also unexcelled.

Mr. William Mills is the Superintendent, and will cheerfully furnish any information desired about the Hospital.



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Rest Hospital has been under the supervision of two thoroughly competent registered nurses (M. R. Moran and Bea O'Brien) for a number of years, while its Medical Directors are Drs. A. S. Hamilton and Hewitt B. Hannah, well-known specialists of Minneapolis.

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"The reason for the effectiveness of these tablets (known to the medical profession as Pariogen Tablets), is that sodium paratoulene-sulfonchloramide does not coagulate blood serum or albuminous secretions, and therefore increases its penetration. In this respect it is in marked contrast to the phenolic antiseptics, iodine, silver nitrate and mercuric chloride.

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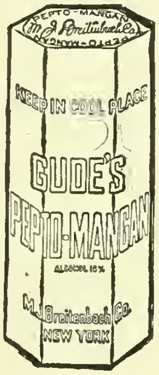

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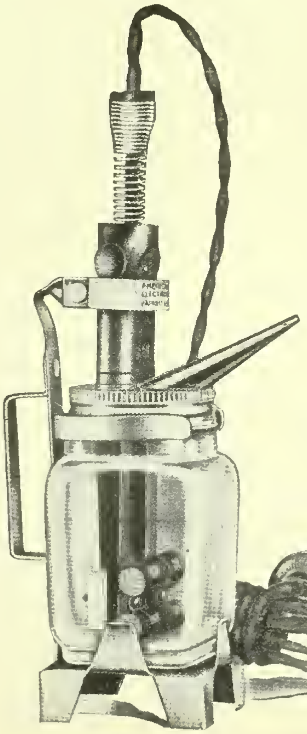

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THE DIAGNOSIS AND LABOR MANAGEMENT OF OCCIPUT POSTERIOR POSITIONS*

By R. T. La Vake, M. D.
Assistant Professor of Obstetrics and Gynecology, University of Minnesota
MINNEAPOLIS, MINNESOTA

This subject is chosen for discussion because, from my observation, it is one of the most common causes of avoidable fetal and infant mortality and morbidity, and maternal morbidity. The experiences following errors in diagnosis and management of these cases, I venture to say, stand out in the memory of every one of us. So vividly do the consequences of error stand out in my memory that I manage every vertex labor with the possibility in view that a mistake in diagnosis may obtain, and, if so, mother and child will not be jeopardized by the error.

It has been my experience that the abdominal examination alone frequently leads one into error as regards the diagnosis of anterior and posterior vertex positions. The apparently clear-cut delineation of the back in the right or left lateral or anterior position, with the small parts well to the opposite flank and the greatest intensity of the fetal-heart sounds well to the front, and with a high level of the cephalic prominence on the side opposite the back, make an anterior position quite likely. However, I have seen the best men fooled by the apparent conjunction of these findings. The most suggestive finding of an occiput posterior position is the prominence of small parts near the midline, anteriorly. With the latter finding the greatest intensity of the fetal-heart sounds may be near the midline and not in the flank and may thus be very deceptive. The more I have studied the position of the fetal-heart sounds in regard to the diagnosis of position the less reliance I have come to place upon them. It is helpful to study the apparent position of the cephalic prominence. The more anterior it appears to be and nearer it approaches the same level as the prominence of the head on the side of the back, the more suggestive is it in vertex presentations that an occiput posterior position obtains. The latter sign is merely suggestive of poor flexion, so common in this position. When one is sure of the sides on which the back and small parts lie, the Pawlik grip will often aid in differentiating in which oblique diameter of the pelvis the long axis of the head lies.

When the cervix is sufficiently dilated to allow one to distinguish by rectum the direction of the sagittal suture, one can be more positive of the position, if one can be quite sure from the abdominal examination on which side the back lies. The definite outlining of a fontanelle in conjunction with the sagittal suture is convincing. This is all very true, but at times the differentiation of the fontanelles is quite impossible, and one cannot be sure of the diagnosis even after a vaginal examination until one has felt the posterior ear. These are the cases that increase our modesty, when we have been quite sure up to the last moment that we were dealing with an anterior position. These are the cases in which so often irremediable damage is done with forceps, before the diagnosis has been checked up by feeling the posterior ear.

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*Presented before the Hennepin County Medical Society, March 7, 1928.

Usually the character of the labor should lead one to suspect the possible error of an anterior diagnosis long before interference is in any way indicated. The early rupture of the membranes in a vertex presentation is suggestive. More commonly than in anterior positions, the pains are less effective, and more irregular and less progressive in their frequency and intensity. More frequently the labor is prolonged. Certain rectal findings are very suggestive: When first examined, the head may be fairly well down in the pelvis and the cervical dilatation about what one would expect if the diagnosis were anterior; when next examined, because of apparent delay, the head may be found to be higher in the pelvis and the cervical dilatation may appear to be less than at the previous examination. The head does not advance consistently, nor is the cervical dilatation consistently progressive. These findings may denote poor flexion in an anterior position, but they are more common in posterior positions. Then, again, although the pains are short, irregular, few and far between, and not effective, when they do come they seem to cause more distress than usual, especially in the back, and the distress is prolonged after the uterus has apparently relaxed.

From my observation the mistakes in management that have brought about disaster have been the following: When operative interference is indicated, one mistakes the posterior position for an anterior position and chooses the wrong maneuver for delivery, and, before he awakes to his error, the child is either injured or dead and the mother badly lacerated; or one lets the time slip by when version, so frequently the operation of choice, is possible; or, because of the prolongation of labor and the consequent increased importunities of the patient, her relatives and friends and the importunities of the physician's anxiety, he is stampeded into interference before the cervix is potentially completely dilated or dilatable; or, because of the prolongation of labor, one gets overanxious and is led to make many unnecessary vaginal examinations with the introduction of infection.

Statistics show that of one hundred cases that begin labor in the occiput-posterior position, approximately eighty will rotate anteriorly if given time and will so deliver normally or with the aid of forceps; approximately fifteen will either deliver unaided in the posterior position or with the aid of forceps, and approximately five will cause real difficulty in deep transverse arrest or in the persistent occiput-posterior position. It is manifest that the first desideratum in the proper management of these cases is the time element. If the membranes are intact, little or no anxiety need be felt, no matter how long the first stage of labor lasts, so long as mother and child show no signs demanding interference. That fatigue on the part of the mother, brought about by the prolongation of labor, may not render interference imperative before dilatation of the cervix is complete, the most studied care of the mother is of paramount importance. She should have light nourishment every three hours; she should have her usual supply of stimulants in the shape of coffee, tea, or cocoa; she should have plenty of rest and sleep, made possible during this time with bromids, chloral, and morphine according to the demands of each individual case, and she should be protected from the anxiety complexes of relatives and friends. No one should be near her who does not radiate assurance and encouragement. She should be prompted to void regularly every three to four hours, and the bowel should be kept empty with a small enema every twelve hours. Under such care one will see women complete the dilatation of the cervix, and reach this complete dilatation in perfect condition, even if it takes two or three days. In that time you will find that they will not have many more pains than in the average normal eighteen-hour progressive labor in the anterior position. It is important that these cases should be definitely told not to attempt to bear down so that dilatation and retraction of the cervix may not be impeded by pinching of the cervix between the head and the pelvis. Cases that give one the most anxiety are those in which the membranes rupture early, and one is striving to bring the cervix to complete dilatation before version may be contra-indicated. Right here let me say that version is so often the operation of choice in cases that give real trouble that I conduct every labor in which I suspect a posterior postion, so that when delivery is indicated version will not be contra-indicated. It is not always possible to do this, but it is, I believe, the proper aim.

In primiparæ the average length of labor when the position is anterior is eighteen hours. Although frequently well within this average time, the posterior position more frequently prolongs labor well beyond this time. Twenty-four to thirty-six hours is not unusual. Generally, throughout this period, abdominal and rectal examinations suffice to make us sure of our ground as regards diagnosis and normality of progress, and most of us are unalterably opposed to vaginal examinations for reasons of asepsis, unless doubt in diagnosis, doubt in findings of progress or indications for operative interference arise. However, in every labor, after twenty-four hours of good labor pains, if I am not absolutely sure of my diagnosis of an anterior position or become suspicious of my findings in a posterior position, I make it a rule to make a vaginal examination. Needless to say, I do not wait twenty-four hours if not sure of my ground from the standpoint of ultimate safety of mother or child. I follow this rule because experience has taught me that the rectal examination is fraught with certain possibilities for error that should be checked up under such conditions. When the vaginal examination is decided upon the patient is taken to the delivery room, and the most careful preparations are made in point of asepsis. Nine times out of ten the vaginal examination will corroborate your rectal findings, and the patient should be allowed to proceed in labor without intervention of any kind. At times you may find a very resistant cervix that may indicate the insertion of a Voorhees bag to expedite complete dilatation, especially if the membranes are ruptured. At times you may find a high eccentrically placed cervix that is comparatively soft and in which gentle manual dilatation combined with the pulling down of the lower lip will suffice to so increase the dilatation and so place the cervix in a better position for further normal dilatation that labor is much expedited. If seen for the first time in apparently the second stage of labor, you may find a tissue paper cervix with a pin-point os that has absolutely fooled every one by rectum and that will melt away under manual dilatation, and labor will terminate normally. A most important finding is a cervix very soft and potentially fully dilated, offering no resistance to the descent of the head or to the examining hand, but hanging down like a curtain and giving the feel by rectum of a cervix not nearly completely dilated. As far as I can determine, this condition is caused either by the recession of the head after previous descent or a pinching of the cervix between the head and the pelvis, brought about by the early descent of the head or by allowing the patient to push down before the cervix has retracted; or it is caused by some nerve interference due to the abnormal mechanics of the position which brings about a cessation of normal cervical retraction. This is a condition that I term a concealed second stage of labor. By rectum alone one gets to suspect this condition by the softness of the cervix, the ease with which you can pull the cervix to any side and find any part of the presenting part, combined with the perfectly stationary character of the labor. As you become adept at recognizing this finding, it will frequently offer a valid indication for vaginal examination in early labor. In the years before I recognized this entity, I left these cases alone and found that the conditions would remain unchanged for hours or days, and when I had to interfere, because of indications on the part of the mother or child, they were in poor condition, and version was likely to be contra-indicated, and, as I said, the cervical condition and the position of the head had not changed one iota. In most of these cases the head is at or above the spines, and version is the operation of choice. Now, when I recognize this condition, I check up the dilatation by the Harris method of manual dilatation, make sure of my diagnosis by feeling for the posterior ear, if there is any doubt, and do an immediate version, if version is not distinctly contra-indicated by a contraction ring or a paucity of fluid. The indication or invitation to version is generally offered by the finding that, in the mere act of checking up the diagnosis by feeling for the posterior ear, the hand will push the head well out of the pelvis. If I am in the slightest doubt of the completeness of the dilatation, I pull down one foot, instead of both feet, and do not complete the extraction until I feel confident that the buttocks and the flexed thigh have thoroughly dilated the cervix and so tired it out that it will not contract around the baby's neck when the buttocks and other foot have been delivered. In all cases of version and breech extraction I believe you should pull down only one foot if there is the slightest doubt in your mind of the completeness of the dilatation and the exhaustion of the cervix. When such a recession of the head occurs, version is generally very easy under deep anesthesia and is far superior to other measures, in my opinion and experience, because it breaks up any deterring action of the attitude of the child that may be a factor, in addition to the posterior position, in holding back the head. Interference at this time saves the mother hours or days of fruitless labor, with the decided advantage that it is undertaken when the mother and child are in the best possible condition. A note of warning is not out or place, namely, to be sure you have such a cervix before you interfere. If you are not sure, let the case proceed normally or you will get deep tears of the cervix and, likely, will add another case to the long list of infant mortalities due to attempting to extract by forceps or breech through an undilated cervix.

I have seen this so-called concealed second stage of labor even with the head so low that the perineum bulged with every pain. In this situation, try to work the cervix back over the head. In doing this you may be surprised to find the head recede to a position where high forceps would be indicated, if delivery were to be immediately consummated by means of forceps. I prefer version to high forceps in every instance where version is not contra-indicated, and I consummate the delivery here by version. If the head does not recede, I make a tentative trial of delivery in the posterior position with forceps. This is a very simple procedure and is generally successful when the head is low. Many obstetricians do not believe that the head should be delivered in the posterior position. I disagree with this belief because so many women deliver so easily and normally when the head is in this position. Apparently it is nature's second best method of delivering a posterior postion. Care should always be taken to prepare for a deep posterolateral episiotomy, beginning in the midline and extending to one side or the other of the anus. If this trial maneuver with forceps is carefully executed, I have never seen it harm the baby in any way. If this maneuver is not successful in the low position, or if version is contra-indicated in the low, mid, or high position of the head, how may we best consummate delivery? I prefer to try, first, manual rotation. With the vaginal hand, free the head by pushing it up, if possible, and at the same time rotate the head, a corkscrew motion. At the same time, with the abdominal hand, draw the anterior shoulder well over to the opposite anterior superior spine. If the back is not thus brought well to the front the head will not stay anterior. At the same time the most pronounced flexion of the head should be sought. Hold this position and see if a few pains will establish the continuance of the anterior position. Now and then it will be established, but, as a general rule, you will have to make a cephalic application of the axis traction forceps to hold it. In high positions of the head, where the Kielland technic of introducing the Kielland forceps is applicable, it is frequently easier to apply the forceps with the buttons facing the occiput, rotate with the forceps and deliver with one application of the forceps. The Kielland forceps work so well in the high positions of transverse arrest or posterior arrest that I always have them ready. If Kielland forceps are not at hand or are not a success, apply the axis-traction forceps and pull the head down to the floor, where the head will either rotate of its own accord, and a second application can be made when the occiput is anterior to the transvere line, or the head may be rotated according to the Scanzoni maneuver. For most men the Scanzoni is a formidable operation, dangerous alike for child and mother, and is rarely necessary. In spite of all these trials, if care is used, the child need not be injured. The trouble is that so many men get excited and haul and yank when a few careful trial pulls should prove to them that a maneuver other than the one they are attempting should be used. Possibly I have given too much space to the handling of what I call the concealed second stage of labor. Its importance, however, I believe warrants this accentuation because, in my experience, the cases showing this condition are the cases that will, in the end, most frequently need imperative interference, which could have been better carried out days before, when the mother and child were in better condition and when version was less likely to have been contra-indicated.

The management of the frank second stage of labor has one thing in common with the management of the first stage, namely, the likely increased allowance of time that should be given to its fulfillment. In the anterior position it is seldom wise to allow a woman to go over two hours in the second stage without advance. In the posterior position I believe this limit should be extended, if the head shows signs of rotating if not of advance, so long as the patient can urinate normally and shows no other signs indicating intervention and the child's heart sounds give no indication of difficulty. An exception to this rule should be made if rapid drainage of waters indicates that we should not let the time slip by when a version may be safely done. This practically limits the desirability of extending the second-stage time to these cases where the bag of waters has ruptured near the beginning of the second stage and we wish to allow time for moulding and the possible natural anterior rotation of the head. Many times at the last moment, as it were, these heads will rotate on the floor after moulding and will deliver normally or with the aid of forceps, or they will deliver in the posterior position with or without the aid of forceps.

The presence of intact membranes is even more necessary and more assuring in the posterior than in the anterior position. Be careful about coming to a decision to rupture them before the second stage of labor. The absence of the dilating bag and the paucity of waters may complicate matters tremendously. You would better, as a rule, keep the patient comfortable under drugs until dilatation is complete no matter how long dilatation may take, or until intervention is indicated by the concealed second stage of labor.

The choice of maneuvers best suited for operative delivery in the frank second stage of labor is the same as outlined above for the so-called concealed second stage of labor. In the last analysis, it is obvious that when conditions indicate that either version or forceps may be used, the choice should depend upon the physician's relative dexterity with these maneuvers. When, however, he can complete either maneuver with equal dexterity, I believe that, under the above conditions, he will find version the easier maneuver and the one more likely to succeed.

THIRD MONTHLY CLINICAL CONFERENCE AT THE MINNEAPOLIS GENERAL HOSPITAL

Department of Obstetrics and Gynecology
March 27, 1928

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MINNEAPOLIS, MINNESOTA

By C. M. Carlaw, M.D.

I.—*Procidentia*: The operative treatment of prolapse of uterus and relaxation of pelvic floor. Report of a recently operated case.

We have here a woman upon whom we operated February 22, 1928, for prolapse of the bladder. Her operation to date gives every sign of being successful. Her bladder is well up in position and her tissues have healed very satisfactorily. She still has some trouble from her urethritis which is receiving appropriate treatment, and we hope she will soon be free from this annoying malady and once more enjoy good health and make life for her more worth while and comfortable.

The patient is 42, multipara, was admitted February 9, 1928. There had been three normal full-term pregnancies and two spontaneous miscarriages without complications. A perineorrhaphy for a relaxed and lacerated pelvic floor was performed four years ago.

The complaints on admission were a painful lump about the urethra and frequency of urination. Examination revealed an inflammatory infiltration about the urethra with a mucо-purulent urethral discharge and inflammation of Skene's glands; there was an accompanying cystocele of the 2nd degree with a slight prolapse of the cervix. The perineum was competent. The general physical condition and all laboratory findings were normal.

The urethritis was treated for two weeks with daily bladder irrigation of 10 per cent argyrol and Skene's glands injected with 1 per cent silver nitrate. An anterior colporrhaphy was then done, correcting the cystocele and tending to push the cervix back to the normal position. The patient's recovery was uneventful, being discharged on the fourteenth day post operative. There is still some urethritis present which is receiving treatment.

Sacropubic hernia may be of the bladder alone (cystocele) or the bladder and uterus together (prolapsus uteri).

Fothergill, of Manchester, defines prolapse as a "displacement, in part or in whole, of the displaceable portion of the pelvic floor past the entire fixed portion."

Cystocele is where the bladder alone has passed through the pelvic floor. In cystocele, when the patient strains or coughs, the anterior wall of the vagina, bladder, and urethra bulges at the vaginal outlet forming an oval mass or swelling. Mere exposure of the lower part of the anterior vaginal wall from tearing of the perineum must not be construed as cystocele. In prolapse, when complete, the anterior wall of the vagina, uterus, and posterior vaginal wall all escape from the pelvic floor in the order named. There are thus three stages in complete uterine prolapse.

In the first stage if you ask the patient to strain downwards when the fingers are in the vagina, the uterus is felt to move downwards with its long axis in the axis of the pelvis. In the second stage the whole anterior vaginal wall is everted, and the cervix is at the vulva. In the third stage the vagina is completely turned inside out and hangs outside the vulva. Within this sac or mass is the uterus and its appendages, the bladder, urethra, and sometimes small intestines. The rectum, however, remains in the normal position, the posterior wall of the vagina being separated from the anterior rectal wall. This stage constitutes a complete "prolapsus uteri" or "procidentia."

Frequently uterine prolapse in its early stages is overlooked because of an insufficient examination. The best way to make sure of your diagnosis is to examine the patient while she is in the erect posture. If she will then cough or bear down you will easily determine the presence or absence of prolapse. The uterus may be small or large. The cervix may be normal or hypertrophied. The perineum may be torn or stretched, but the salient features remain (1) The early signs of cystocele and retroversion; (2) eversion of the anterior vaginal wall from below upwards; (3) inversion of the posterior vaginal wall from above downwards.

ANATOMY

Peter Thompson, in 1899, revolutionized the conception of the pelvic fascia. It is now simply looked upon as the fascial covering of the pelvic muscles and not as a series of independent structures. It has also been pointed out that the subperitoneal tissue which intervenes between the pelvic viscera does not contain any ligaments. The broad ligament is a mere name. The round ligaments and the ovarian ligaments are muscular. The uterosacral and uterovesical ligaments are composed of smooth muscle and fibrous tissue continuous with that of the uterus and are not definite structures. The round and broad ligaments do not play any part in determining the position of the uterus. It is the parametria that makes the cervix the fixed portion of the uterus. This strong fibromuscular tissue running out from each side of the cervix to the side walls of the pelvis constitutes the so-called "ligamenta cardinalia." That portion of the subperitoneal tissue in front of the cervix constitutes the so-called suspensory ligament of the genito-urinary organs. The perivascular fasciæ surrounding the internal iliac vessels and their branches become firmly attached to each other forming a strong tissue which is closely attached to the vaginal and uterine walls, thus maintaining a firm support for these organs. To this mass is added a certain amount of unstriped muscle fibers, and thus the parametrium becomes as a whole the most essential support to the uterus. The pelvic diaphragm therefore must be looked upon as a composite structure, formed by the parametrium and pelvic muscles. These muscles are the pubococcygeus, the iliococcygeus, and ischiococcygeus, which run from the pubes to the sacrum and coccyx and are laterally in close contact with the obturator internus muscles. The pubococcygeus and the iliococcygeus are usually blended together and form one muscle, the levator-ani. The iliococcygeal portion is very thin and is not of much importance, but the pubococcygeal portion is a well-developed band, which, with its fellow of the opposite side, forms a sling around the vagina, base of the bladder, and upper part of the urethra, to all of which structures it is firmly united and thus assists in holding these structures in position. Where they surround the rectum they act as a sphincter, which flattens out this canal into an anteroposterior slit. Immediately above this muscle is the ampulla of the rectum.

ETIOLOGY

In endeavoring to find the real cause of uterine prolapse it must be admitted that while the vaginal outlet and the perineum are in the majority of cases torn and defective these defects are not by any means the main etiological factor. They are separable accidents favorable to prolapse and nothing more. There are many women who have severe lacerations and many pregnancies and who have worked hard physically; others with chronic bronchitis and its accompanying severe cough yet have no prolapse in spite of all these supposed causes. Again we see prolapse in many women who have little or no primary defects in the pelvic muscles. Some who have never been pregnant. There must then be some other cause. The constant primary lesion which permits of prolapse is a relaxation of the subperitoneal fibromuscular tissue. The most common cause is probably superinvolution after pregnancy. The real factor in its production is not definitely known, but, in all probability, it is an atrophic and degenerative change. These changes usually take place during or following the menopause, which is the most frequent age for the occurrence of prolapse. If these atrophic changes are confined to the lower part of the paravesical and paravaginal tissues, cystocele alone is the result, but, if the upper paravaginal and lateral parametric tissues are also affected, then we get prolapse of the uterus. If it is confined to parametric tissue alone, then we get retroversion of the uterus only.

Direct injury to the pelvic floor by forceps delivery before complete dilation of the cervix is probably often an assisting cause. A uterus that is not loose will not descend simply because the vagina is straight and has a wide outlet. It is a clinical fact that women who have prolapse, have tissues which tend to stretch and not to tear. Increased weight of the uterus is not of much importance as a causative factor; in fact, the uterus is often very small. Intra-abdominal pressure is raised during lifting defecation, and coughing and is a strong factor in forcing the loose pelvic organs downward. But this same pressure will not loosen normally attached pelvic organs.

SURGICAL TREATMENT

The early surgical treatment of uterine prolapse dates back to the 19th century and was then confined to plastic vaginal operations, but at that time the results were not very brilliant. Later, when abdominal surgery became safe the vaginal operations for prolapse were abandoned and the abdominal route became popular. By this method the abdominal muscles are utilized to maintain the uterus in a fixed position. The manner of fixation is varied; in fact every prominent gynecologist has developed a method of his own. But now the pendulum has swung back, and abdominal fixations are rapidly giving away to the more simple, easier, and less dangerous vaginal method. In fact the abdominal fixations are now better reserved for those cases where for some pelvic or abdominal complication the abdomen has to be opened. It may be stated that the vaginal operations, when properly and thoroughly performed, are proving very satisfactory.

The recent improvements in the surgical treatment by the vaginal route depend on the recognition of the fact that the uterus is supported by the two lateral pedicles of parametric tissue which are continuous with the cervix and upper part of the vagina. In prolapse these diffuse pedicles are elongated and the object of the operation is to shorten this pathologically elongated parametric tissue. But as this contains the blood vessels, nerves, and lymphatics it therefore cannot be cut. We can, however, shorten these pedicles by baring them from their mucous membrane covering and drawing them together in the median line in front of the cervix. This maneuver pulls the cervix up and back into the hollow of the sacrum where it belongs.

There are various ways of operating on the anterior and posterior vaginal walls. In fact there is no one best way. It is better for each operator to work out the method which suits him and the particular case he is operating upon. Do not use any suture material which requires removal and do not use a running suture but rather interrupted sutures. The steps of the operation which we usually employ are as follows:

First step: Grasp the cervix with volsella forceps and pull it down, then make an incision across one-half of the cervix in front just above the external os. Should the so-called uterosacral ligaments be much elongated with a large roomy vaginal vault, this incision should extend out and up along both ligaments so that when they are brought together in front of the cervix they will carry it high up in the hollow of the sacrum.

Second step: Make tense the anterior wall of the vagina by traction on the volsella forceps and enter a pair of slightly curved dissecting scissors between the vaginal and bladder walls. Push the scissors down and keep separating its blades until the urinary meatus is reached.

Third step: Split the vaginal wall just loosened down the center with scissors.

Fourth step: With the aid of a sharp knife dissect out the flaps on each side well over to the rim of the pelvis because the torn fascia is often retracted over to and often under the rami of the pubes, deep in the angle between the bladder and vaginal flaps.

Fifth step: Dissect off the bladder from the cervix to the peritoneal line.

Sixth step: Cut off the excess vaginal flaps leaving about half an inch on either side.

Seventh step: With a curved needle threaded with a No. 2 chromic catgut suture, bring the mucous membrane and underlying uterosacral ligaments together in front of the cervix. Include a bite of the lower part of the cervix in your stitch and tie. This will pull the cervix well back and up in the hollow of the sacrum. The next suture is placed just in front of the first and it will contain another bite of the cervix as it passes across the field. The third is placed in front of the second and again takes a bite of the cervix a little higher up than the second suture. You will now find that when these sutures are tied the cervix will be drawn well up in the hollow of the sacrum and that the uterus lies in an anteverted position on the bladder, being held there by these three sutures. It is thus in its natural position which in itself is antagonistic to prolapse.

Eighth step: Now bring the retracted aponeurosis together in front of the bladder. For this purpose we use an 8-inch chromic No. 2 suture threaded on each end with a curved needle. Starting the first suture well up under the cervix, pick up with anatomical forceps a good bite of the dissected and retracted aponeurosis, and pass your needle through this bite from behind forward so that you can always see where your needle is going and know what you are going to have in its bite. Do the same on the opposite side with the other needle. Clamp the two ends of the suture together with forceps. Then pass another suture one-half an inch below the first in the same manner and continue the suturing until you have completely included all this tissue down to the urethra.

Ninth step: Commencing above, tie each suture taking care to first push the bladder up in the pelvis out of the way of the coaptated edges of your suture line.

Tenth step: With short sutures of No. 1 chromic gut, bring the edges of the mucous membrane together by interrupted sutures from above downwards, always including a bite of the aponeurotic tissue in each suture, cutting the first suture applied after the second suture is tied and the second suture after the third is tied, and so on down, always pushing the bite upwards and backwards after the suture is cut. By placing and cutting the sutures in this manner you are always able to keep the field of operation in view. You will now find when your anterior wall is finished that your cervix and line of suture is well up and out of sight and if the tissues heal in this position, it will remain out of sight. Of course the perineum, if torn or relaxed, should be repaired high up by some good method with which you are most familiar.

If the cervix is heavy or elongated it should be amputated. In such cases the first incision made in front of the cervix will pass all the way around the cervix instead of only half way. In fact it may be carried well up into the fornix so as to raise the stump of the cervix farther into the sacrum.

By A. E. Benjamin, M.D.

2.—*Complete hysterectomy*: Its value as an operative procedure near the menopause for those cases having subinvoluted retrodisplaced uteri with hyperplasia of endometrium and cystic degeneration of the cervix. Report of two cases recently operated.

Case 1 is that of a patient 45 years old, married. Admitted March 1, 1928.

Personal history: She began to menstruate at age of 14, and states that she was regular up to six months ago, duration was from four to five days with some dysmenorrhea. She has been married twenty-four years, has had seven pregnancies, five living children, ages 23, 20, 18, 16, and 2, and one six weeks abortion in 1917 at which time she had very profuse bleeding. She had a cholecystectomy and appendectomy in 1913.

On January 12 she began to have irregular flow, quite profuse at times with large clots. The last normal menstrual period was in December, 1927.

Physical findings: On admittance her blood pressure was 124/80, she was anemic and her teeth were in poor condition. She had an operative scar in the right lumbar region and one in the right epigastric area. She had a few external hemorrhoids, external genitalia were normal, vaginal mucosa pale, slight anterior and posterior colpocele, bilateral laceration of the cervix, os patulous and admitted finger, and a third degree retroversion of uterus. The body of the uterus was subinvoluted, soft, boggy, and twice normal size. The adnexa seemed normal except for slight enlargement of the right ovary. All other organs and parts of body seemed to be normal. Urine is negative; hemoglobin, 55 per cent, R.B.C., 3,160,000; W.B.C., 9,100; P.M.N., 76 per cent; coagulation time, 5 minutes; bleeding time, 2½ minutes; Wassermann, negative; temperature and pulse, normal.

Owing to the continuous loss of blood and the undetermined condition of the interior of the uterus and the low hemoglobin and red count, a dilatation and curettage was decided upon to endeavor to stop further loss of blood. This was done on March 5. A marked hypertrophic endometritis was found. A thorough D. and C. was performed, and the uterus packed. On account of the anemic condition of the patient with low hemoglobin and red blood count, a transfusion was done on March 17. 400 c.c. citrated blood were used. This caused considerable improvement in the general condition of the patient so that her hemoglobin rose from 55 per cent to 70 per cent.

This patient would very likely have a recurrence of her excessive flowing and loss of vitality unless something further was done. Deep *x*-ray was considered, as well as radium, but these measures would not repair the cervix nor replace the uterus. A cauterization of the cervix would have been indicated had there been much cervicitis and hypertrophy or diseased condition of the glands. The uterus would have had to be replaced and the cervix repaired if any less radical operative procedure had been decided upon so as to favor normal circulation and thereby endeavor to overcome the apparent hypertrophy of the uterus. Her general condition was such that we believed that she could stand a major operation. Therefore, on account of her age, the history of severe flowing spells, the boggy, displaced, and hypertrophic condition of the uterus with laceration of the cervix, her having raised five children, and with the additional knowledge that some of these cases do develop cancer of the uterus later, we decided upon a radical procedure. On March 19 we did a complete abdominal hysterectomy with a bilateral salpingectomy and the removal of an enlarged, cystic, unhealthy right ovary.

We were careful to close the vaginal orifice with plain catgut in such a way as to prevent all bleeding and turning the mucosa downward. The broad and round ligaments were brought over the vault of the vagina and stitched with chromic catgut, the uterine vessels having been ligated with chromic catgut and the remaining ovary superimposed on the central structure.

The patient is in very good condition. Her convalescence has been uneventful. This is the eighth day since the operation, and no doubt she will continue to make very satisfactory improvement. We have removed a certain amount of personal anxiety because she is assured of continued good health as far as any uterine disturbance is concerned, and she avoids the possibility of cancer developing in this susceptible organ. To have used deep *x*-ray or radium in this case seems to me would have been inadvisable, as such a procedure would have destroyed the function of the ovaries. She would still have remaining the displaced, enlarged, and lacerated uterus. The cystic ovary would have persisted. My personal preference is for a radical operation under similar circumstances.

Case II is that of a patient 33 years old, married, admitted March 13, 1928.

Personal history: This patient had smallpox as a child. Her general health has been good. Her menstrual periods began at fourteen, thirty-day interval, duration four to five days, flows profusely and has considerable pain. She has had seven normal pregnancies and one abortion. Since the abortion the duration of the flow has been from ten to twelve days. The patient has felt ill since the birth of the seventh child two years ago. She has considerable frontal headaches and a dull pain in the lower abdomen and lumbar region.

On January 17, 1928, the patient had severe pain in the abdomen and on the 18th she lost a two months fetus. For several months previous to the last pregnancy her menstrual periods were quite irregular.

Her general physical examination is practically negative. She has an old lacerated and relaxed perineum with a second degree rectocele and second degree bilateral laceration of the cervix with chronic endocervicitis and cystic degeneration. The corpus is one and one-half times normal size, there is a third degree retroversion and flexion, it is partially movable, soft, and boggy. The uterus and adnexa are tender.

Laboratory findings: Urine, normal; hemoglobin, 80 per cent; red blood count, 4,400,000; white blood count, 6,600; P.M.N., 63 per cent, coagulation time, four minutes, and bleeding time two minutes.

The patient having complained of lower abdominal pain, having aborted from an unknown cause, her menstrual periods being profuse and painful and more or less irregular of late, having a displaced, large, boggy, and somewhat fixed uterus with a lacerated and badly diseased cervix, and having had seven children, a complete hysterectomy was decided upon. The uterus was one and one-half times normal size, soft, and boggy. The appendix and gall-bladder were normal. A complete hysterectomy with a bilateral salpingectomy was performed. The ovaries were allowed to remain. The vaginal orifice was closed with plain catgut in such a way as to prevent all bleeding. The broad and round ligaments were brought over the vault of the vagina and stitched with chromic catgut, the uterine vessels ligated with chromic catgut, and the ovaries superimposed on the central structure.

As you see, this case is now in good condition. She is making very satisfactory improvement and will soon be out of the hospital. This woman will be assured of good health as far as the pelvic organs are concerned in the future, and she will be able to take care of her large and growing family. If we had not chosen to do a thorough operation, a curettage and amputation of the cervix would have been indicated, also a laparotomy to replace the large displaced uterus. We would not have been certain that there would not have been a repeated abortion, more or less invalidism, or, possibly, a cancer. I am quite sure that it is proper for us to advocate a similar form of treatment in other cases with findings and symptoms analogous to this one. If cancer is to be prevented, we must perform operations early in individuals suffering with conditions that may result in malignant growths. After weighing all the evidence in each case and explaining the facts to the individual sufferer, early and thorough operation will undoubtedly be the rule of the future, thereby avoiding suffering and early deaths.

By J. H. Simons, M.D.

3.—*Toxemia of pregnancy*: Presentation of two undelivered cases under observation for a toxemia, presumably of a pre-eclamptic type.

Case I is that of a woman, 35 years old, para viii; grav. x. L.M.P., July 9, 1928.

Expected confinement April 16, 1928. Prenatal care at Minneapolis General Hospital since January 16, 1928. P.H. Scarlet fever, pneumonia and childhood diseases and smallpox. F.H. Neg. 1 child died of sarcoma of kidney.

Menstrual history, normal.

Previous pregnancies, 1913, twins, 7 months gestation. Two antepartum convulsions. Generalized edema, blind spells. Termination of pregnancy at seven months. Forceps delivery of twins living one and one-half days. Convalescence, normal.

1914, normal spontaneous delivery at nine months. Slight edema of ankles in last month. Duration of labor, three to four hours. Convalescence, normal.

1915, normal spontaneous delivery at nine months. Edema of ankles, ninth month.

1916, normal, spontaneous, edema ninth month.

1917, normal full term. Edema of hands and feet eighth and ninth months. Puerperium, normal.

1922, delivery at eight months, spontaneous. Edema seventh and eighth months. Premature labor. Puerperium normal.

1923, miscarriage at two months.

1924, full term, edema eighth and ninth months. Normal delivery and puerperium. Present pregnancy, now three and one-half weeks from term.

A. Symptoms and physical finding:

1. Nothing except occasional dizzy spells first 3 months.
2. Pain in right lower quadrant during 4th month on exertion—severe aching character without radiating.
3. Black spots before eyes for past month (7th-8th month).
4. Edema of feet, ankles, and hands, periodically last 2 months.
5. Feeling of "numbness' in hands and feet past month.
6. Frequency for last month.
7. Foul discharge, 1 month.
8. Eye ground examination negative.
9. Blood pressure range 174/94 to 150/88. Average 150/90.
10. No fetal heart heard March 16-17. Audible now.

B. Laboratory findings:

1. Urine, faint trace albumin; otherwise negative.
2. Blood, normal microscopic. Wassermann, negative.
3. Blood chemistry March 17, 1928:
   Creatinine, 1.7 mgs.
   Urea n., 5.1 mgs.
   Uric acid, 3.0 mgs.
   Chlorides, 387.0 mgs.
   Van Slyke, 46 per cent.

C. Therapy:

1. Rest in bed.
2. Carbohydrates, low protein, fat-free diet.

D. Prenatal course:

1. Under observation since January 16, 1928.
2. Nervous, insomnia, tires easily.
3. Dental caries—referred to dentistry where five extractions were made.
4. Dentist's report March 5:
   7 roots, 1 cavity, 4 devitalized and abscessed teeth, gingivitis, 9 extractions.
5. Swelling of hands, headaches, vertigo beginning about March 5, 1928.
6. Edema much more marked March 12, feeling worse.
7. Edema much worse, fatigued and very dyspneic, March 15. Sent into hospital.
8. Diet restricted more.

This case and the subsequent one represent a group of toxemias of pregnancy in which clinically albuminuria and increased blood pressure are present as an early warning of the complication. They may at the time of their detection be unaccompanied by subjective symptoms and often moderate hypertension precedes the albuminuria. It is often difficult to make in the early stages a definite diagnosis as to the nature of the toxemia, that is, whether it is the effect of pregnancy upon a kidney previously damaged or simply a low reserve kidney.

The chemistry of the blood and urine give much information concerning the diagnosis, prognosis and treatment of this group of toxemias. It is to be emphasized that the condition of the kidneys is not the cause but the result of the toxemia, although a pregnancy may influence unfavorably a chronic nephritis. This case presents a past history that may have resulted in kidney impairment, but in spite of eclampsia in the first gestation there were six normal subsequent pregnancies except for edema of lower extremities, and in one case edema of hands and feet. Consequently we can rule out a chronic nephritis. The initial symptoms were pathognomonic, high blood pressure with only trace of albumin and no casts. The blood chemistry showed a low urea nitrogen, moderately high uric acid content and slightly lowered Van Slyke. These are not the marked changes of an impending eclampsia.

This patient passed through a normal labor with gradual subsidence of the toxemia.

Case II is that of a woman, aged 27, para i, grav. iv. L.M.P., July 1, 1927. Expected confinement, April 8, 1928. Prenatal care at Minneapolis General Hospital since October 6, 1927.

P. H., childhood diseases.

F. H., negative.

Menstrual history, normal.

Previous pregnancies:

1919, delivery at eight months, spontaneous, easy labor. Had "kidney trouble" with no convulsions but severe edema of face, hand, abdomen, and lower extremities, went blind once during eighth month. Labor began at end of eighth month. Had high blood pressure. Severe headaches.

1924, miscarriage at five and one-half months.

1925, miscarriage of twins, five months.

Present pregnancy, now three weeks from term

A. Symptoms and physical findings:

1. Has had burning and frequency of urination for 3 weeks.
2. Slight swelling of ankles.
3. No visual disturbances or headaches.
4. Blood pressure average, 130/90.
5. Eye ground examination negative.

B. Laboratory findings:

1. 24 hour urine specimen, March 10, 1928.
   Acid reaction.
   1018 sp. gravity.
   0.8 grams albumin per liter.
   Sugar, negative.
   Urea, 522.8 mgs.
2. Several catheterized specimens subsequently showed:
   Albumin, faint trace to negative.
   Pus cells, 2-10 per h. p. field.
3. Blood:
   Negative except anemia; Hgb., 53-6, by Sahli method.
   Wassermann, negative.
4. Blood chemistry: March 9 to March 13, 1928.
   Creatinine, 2.0 mgs.
   Urea nitrogen, 8.25 mgs.
   Total N. P. Nit. 17.0 mgs.
   Uric acid, 3.6 mgs.
   Van Slyke, 46 per cent and 41 per cent.

C. Therapy:

1. Rest in bed.
2. Carbohydrate, low protein, fat-free diet.

D. Pre-natal course:

1. Under observation since October 6, 1927.
2. Frequent vomiting and fainting spells during fifth and sixth months.
3. No elevation of blood pressure.
4. Frequency of urination for last two months.
5. Began to show albuminuria (3 plus) March 5, 1928.

March 7, 1928, albumin 4 plus.
March 8, 1928, albumin 4 plus with blood pressure elevated from 116/74 to 124/92.
Admitted to hospital.

She had a pre-eclamptic toxemia in her first pregnancy followed by two miscarriages, often an indication of chronic nephritis. In the present pregnancy the only findings are generalized edema, gradually increasing albuminuria with a fairly normal blood chemistry and no subjective symptoms. Her labor was normal and there was a gradual subsidence of edema and albuminuria. Post-natal observation will reveal the true quality of her kidneys.

By F. L. Adair, M.D.

4. Case of pregnancy with bilateral inguinal hernias. Urticaria of pregnancy and varicosities of the mons veneris.

The case is that of a woman, age 30, para iv, grav. v. Admitted March 23, 1928.

P. H., scarlet fever and childhood diseases.

F. H., sister died of tuberculosis in 1924.

Menstrual history, normal.

Previous pregnancy, 1920, normal; 1923, normal; 1924, miscarriage at 3 months; 1925, normal delivery and puerperium.

Patient developed skin lesions of vesicular and macular type diagnosed as urticaria of pregnancy by obstetrical and skin services. These lesions cleared up during first month of puerperium. Showed rather large varicose veins of mons veneris (right side) and right inguinal region. Small right inguinal hernia present.

Treatment, calcium lactate and mod. calamine lotion.

Present pregnancy:

Pre-natal, first visit day of admission to hospital, having premature labor pains.

L. M. P. (?) August 1, 1927. Due (?) May 8, 1928.

1. Considerable vomiting and edema first trimester.
2. Same lesions as in last pregnancy began to develop during second month this time. In 1925 lesions were confined to chest and face. Now generalized over entire body.
3. Varicosities of mons verneris more prominent than during last pregnancy.
4. Quite large bilateral inguinal hernias—very painful.
5. Patient has had rather hard, premature labor pains two different nights since admission. Pains stopped with morph., gr. ¼; atropine, gr. 1/150. Tr. hyoscyamus, Tr. Belladonna, Tr. opii, M. V. is being given daily q. 3 hours now to prevent uterine contractions.

This case presents a number of interesting features. She entered the hospital with a threatened premature labor, which was controlled with uterine sedatives. These uterine pains subsided under the administration of uterine sedatives and she went on to approximately term and was delivered on May 7, 1928. Following the delivery, the skin manifestations cleared, the varicose veins diminished in size, but the hernias remained and she was re-admitted to the hospital on June 11, 1928, and operated on for bilateral hernias on June 14, 1928.

Skin manifestations during pregnancy are not infrequent and are occasionally of an urticarial or toxemic type. The causation of these lesions is rather obscure but they do seem to be definitely associated with the pregnancy itself, recurring in some cases with each successive pregnancy and disappearing usually within a few weeks after the termination of labor. There does not seem to be any definite association of this condition with other so-called toxemic manifestations. This case has been of some interest to us and it seemed worth while to demonstrate these conditions to you as it is not often that we see such a variety of complicating conditions associated with pregnancy.

WHEN AND WHEN NOT TO OPERATE IN ACUTE BILIARY DISEASE*

By Alfred Brown, M.D.
Associate Professor of Surgery, University of Nebraska, College of Medicine
OMAHA, NEBRASKA

Acute disease of the biliary apparatus is a condition in which the margin between operative interference and non-operative treatment during the acute attack is so narrow that the keenest observation and soundest judgment are required to avoid an error on either side of the scale. The problem, as a rule, must be met by the attending physician, and it is his problem to decide whether as one alternative, immediate operation is necessary to save life, or whether, as the other, it is safe to pursue a course of watchful waiting thus giving nature the opportunity to take its course and aid the defenses of the body to overcome the acute pathology and allow the condition to pass into the interval stage when operation should be performed. The policy of allowing the acute symptoms to subside is the better one to follow if it is safe. This does not, however, mean that the condition has become a non-surgical one, for, I believe, one attack of acute biliary disease is a sufficient reason for surgical intervention even though the acute symptoms have disappeared and the patient has become practically symptom free. Appendicitis offers an analogous condition for, after many years experience, the profession as a whole has come to the conclusion that the first attack of acute appendicitis is rarely the only one and it has become the common practice in that disease to advise operation in the interval between attacks. This is more true of acute biliary disease, for in this condition there is an added reason for operation which is not present in appendicitis. The studies of many observers have shown that after an acute attack true normality is rarely, if ever, reached, and, though another acute attack may not occur for a long time or may never occur, there is, nevertheless, through the interchange of inflammatory products between the gall-bladder wall and liver cells by means of the lymphatics a slow increase in the pathology in the liver by which the hepatic mechanism sooner or later becomes upset, and as a result the patient becomes handicapped physically and economically through secondary chronic gastro-intestinal abnormality and, though not acutely sick, nevertheless becomes more or less of a chronic invalid.

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*Presented before the annual meeting of the Sioux Valley Medical Association held June 27, at Sioux Falls, S. D., June 24, 1928.

The decision between immediate operation and watchful waiting is dependent upon the type of pathology present in the individual case under observation, and an understanding of this pathology and the symptoms accompanying the various types of biliary disturbance, are necessary in order to arrive at a correct diagnosis of therapeutic need.

There are two main divisions of the pathology of the biliary apparatus which may be defined as:

A. Mechanical disturbance of the biliary tract in which the coincident pathology is of the nature of a traumatic inflammation and little or no infection is present.

B. The infectious disturbance of the biliary tract which occurs either as (a) an addition to mechanical disturbance or (b) originating purely as an infectious process which causes mechanical symptoms only when the pathology of the infection has become sufficiently marked to cause a block in some part of the biliary apparatus.

In the ultimate analysis the question of when to operate thus rests upon the ability of the physician to determine whether a sufficient degree of infection exists to preclude a return of the tissues to approximate normal. If this be true immediate operation should be performed even in the presence of the infection, dangerous though such a course may be. The outcome of the case will rest in large measure upon the promptness with which the diagnosis is made, for in biliary disease, as in all other acute surgical diseases of the abdomen, the lapse of time occurring between the onset of the disease and the institution of surgical intervention is one of the most important, if not the most important, elements in determining recovery. This is particularly true in disease of the biliary tract, for in cases which have existed for a considerable length of time thickening of the gall-bladder wall with congestion and enlargement of the liver occur as the result of the long continued infection. These may progress to such a degree during the acute attack that removal of the offending gall-bladder by cholecystectomy becomes a hazardous procedure, and simple drainage may be the operation of choice to save life. If this is the case, although the patient recovers temporarily, the underlying pathology in the gall-bladder remains, for return to normal rarely occurs, and in a large percentage of cases a secondary operation during the interval stage will be required to relieve the patient of the gastro-intestinal symptoms due to the residual gall-bladder pathology.

The first, or mechanical, type of disease produces the syndrome which is commonly referred to as "biliary colic." It is hardly necessary to refer to the sudden onset, acute pain in the right upper quadrant radiating to the right shoulder blade, nausea, vomiting, and the intense, cramp-like, paroxysmal character of the pain which can be relieved only by morphine. There are, however, two factors to which I desire to call attention. First, the onset: In mechanical biliary disease as in any other mechanical disturbance in the way of blockage within the abdomen, the patient can give the exact time, almost to the minute, when the onset occurred. There is no hesitation or doubt, the time is definitely fixed in the patient's mind. The second factor is the high leucocyte count. These cases of simple mechanical biliary disease will give a leucocyte count as high as 30,000 per cu. mm. with no determinable infectious pathology and return to apparent normal in a few hours. Consequently as a determinant of the presence or absence of infection the leucocyte count cannot be relied upon.

The most commonly encountered causes for mechanical disturbance are:

a. Stone impacted in the neck of the gall-bladder or the cystic duct.

b. Kinking of the cystic duct at its junction with the gall-bladder as described by Krukenberg and Aschoff.

c. Torsion of the gall-bladder.

With the exception of the last mentioned, torsion of the gall-bladder, these acute symptoms due to mechanical block, though of the utmost severity while they last, usually subside in a few hours. The smooth muscle of the gall-bladder wall relaxes and allows the stone to fall back into the fundus of the gall-bladder, or with its relaxing the kink in the duct is ironed out and the resulting opening of the duct allows the bile once more to pass through. In some cases the stone makes its way through the cystic duct into the common duct and into the intestine. In any event the obstruction is relieved. When, on the other hand, torsion has occurred, the inflammatory stage is soon reached and in turn passes on to resulting gangrene of the wall of the gall-bladder due to the shutting off of its blood supply, and the condition constitutes one of the most serious abdominal emergencies with all the attendant dangers of perforation of the gall-bladder and general peritonitis.

A more gradual blockage of the cystic duct, either by stone or kink, may give rise to the condition of hydrops of the gall-bladder. In this condition a low-grade infection of the gall-bladder wall is present which though it is not acute must be classified with the infectious type of biliary disease rather than the mechanical although primarily due to mechanical factors and constituting an abdominal emergency.

When acute infection is added to the picture, with or without the presence of mechanical block, the more common type of acute gall-bladder disease is encountered. The organism causing the infection may be of almost any type, even the gas bacillus of Welch has been found (Cottam). The staphylococcus, colon bacillus, and streptococcus, however, are more frequently found than any other types of organism. Any degree of the pathology of inflammation and infection may be encountered. That is, it runs through all the stages from acute cholecystitis with the attendant intensely red and thickened gall-bladder wall to a stage in which complete gangrene may be present with perforation of the wall and abscess formation in the neighboring structures. Unless the progress of the infection has been exceedingly rapid it stirs up an accompanying pericholecystitis which results in the omentum plastering itself around the lesion and walling off the abscess. The intermediate grade between these two may be defined as a suppurative cholecystitis in which the pus is confined within the gall-bladder. Although these gradation in the pathology represent an ascending scale in severity they are not by any means clearly defined and run one into the other. The following seems a fairly satisfactory working classification:

B. Inflammatory.

a. Hydrops of gall-bladder.

b. Acute inflammatory cholecystitis.

c. Acute suppurative cholecystitis.

d. Gangrenous cholecystitis (mechanical or infectious).

e. Acute pericholecystitis with or without perforation of the gall-bladder and with or without abscess formation.

f. Acute pancreatitis may be the first acute symptom.

The symptoms of acute biliary disease are:

a. Sudden onset.

b. Pain radiating to right shoulder, acute and severe.

c. Fever of moderate degree.

d. Nausea and vomiting.

e. Leucocytosis generally high.

f. Abdominal tenderness and rigidity.

g. Pain persisting twenty-four hours or more or returning after a short remission indicates an inflammatory lesion which requires operation.

h. Development of a mass in the upper right quadrant denotes the inflammatory type and requires immediate operation.

The principal interest attached to these symptoms is that they serve as subjects for analysis to determine upon which ones we can rely in a given case in coming to a decision whether we are dealing with an attack of acute biliary disease which will subside or with one in which immediate operation should be performed. In all cases the classical symptoms of pain, accompanied by slight fever, abdominal tenderness and rigidity, increased by pressure during inspiration, with sometimes nausea and vomiting, are present and will be of no aid in making the decision. The leucocyte count is also untrustworthy. There are, however, two signs upon which, I believe, reliance can be placed. These are (a) the duration of the painfulness of the attack, and (b) whether a mass develops in the right upper abdomen. If an attack of biliary colic belongs to the simple mechanical type and is uncomplicated by inflammation or infection, the pain accompanying it rarely lasts over eight to twelve hours. Persistence of the pain with unabated severity beyond that period of time or subsidence of the pain temporarily with recurrence within a few hours with equal or increased intensity goes far to confirm the fact that the pathology has passed beyond the simple mechanical form and infection is present and surgery is indicated as an emergency measure. If at any time during an attack of biliary disease a distinct mass can be palpated in the upper right quadrant under the liver margin it is safe to assume that the infection of the gall-bladder has progressed beyond the point where return to normal is possible and that one of the extra-biliary complications is in the making giving an indication for surgical intervention.

A primary attack of acute biliary disease of sufficient severity to require operation during the acute stage is exceedingly rare, though it may occur as the reported cases of torsion with gangrene and primary overwhelming infection show. More usually a history of repeated previous attacks of gradually increasing severity can be elicited until finally the attack which does not defervesce come on spontaneously. Translated into the terms of pathology this means that during each of the attacks a little more infection has been added which has little by little decreased the viability of the gall-bladder wall until finally its resistance has been so far broken down that it is no longer able to overcome the infection. With a gall-bladder in such a condition, suppuration, perforation or gangrene then ensues and an abdominal emergency which places the life of the patient in grave danger is present.

Bearing these facts in mind it seems fair to conclude that biliary disturbance of sufficient severity to cause an attack of biliary colic should be regarded as a surgical condition, just as much as an attack of acute appendicitis. Operation is indicated during the interval and should be performed when the anatomy of the parts is not distorted by acute inflammation and a careful and accurate cholecystectomy can be performed with a minimum of danger. The patient is in this way afforded the best chance of permanent relief and saved the likelihood of an attack of serious abdominal disease, during which operation, performed as it is under the stress of emergency conditions, is both dangerous to the life of the patient and unsatisfactory in its morbidity results. If biliary disease is viewed in this light, the number of cases of sufficient severity to warrant operation during the acute attack will be greatly diminished.

THE PERIODIC HEALTH EXAMINATION FOR MOTHERS AND BABIES*

The annual address delivered before The Section on Obstetrics and Gynecology of the American Medical Association, at its recent session in Minneapolis, by Dr. Jennings C. Litzenberg, of the University of Minnesota, was a notable event.

It was notable for its departure from the usual color of such addresses devoted to the current progress of the profession in his specialty; notable for its utter frankness in dealing fearlessly with the things the many have not done to safeguard their clients; and most notable for the emphasis it put upon the periodic health examination as a preventive measure in gynecology and obstetrics.

Words, indeed, could hardly be more frank or forceful than those he uttered upon this occasion. They bear repetition.

ON CANCER OF THE UTERINE CERVIX

Referring to cancer of the cervix of the uterus, he said: "When the patient has symptoms, not definite but suspicious, waiting for distinct evidence is too often the policy. During this wait the disease frequently becomes incurable. When these suspicious symptoms arise, a biopsy and a diagnostic curettage should be done forthwith, because the chief hope of cure is in early diagnosis, followed by immediate treatment. * * * If more physicians would educate women to have periodic examinations these early signs of cancer would not escape detection."

He adds: "Delay in treatment, even of a week, affects the cancer mortality. At the Memorial Cancer Institute of the University of Minnesota we have been shocked to find that after cancer has been suspected or even diagnosed by the physician there has been a delay of weeks or months. Twenty-five per cent of entering cases have been examined by physicians several months before admission, when the diagnosis should have been made. At the Huntington Memorial Hospital it has been found that the mortality rate of cancer of the cervix is increased four per cent a week. It doesn't take long to become incurable. Delay means death."

He quotes Mathews as saying: "Let every cervicitis be approached, not as a cervical catarrh, or an hypertrophy, or a laceration, but as the prologue of an epithelial drama, the curtain of which may be a malignant death."

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*A review of an address, delivered by Dr. Jennings C. Litzenberg, at the annual meeting of the American Medical Association, Minneapolis, Minn., June 11-15, 1928.

Finally, he sounds the stirring note of health protection: "The specialist sees relatively few cases, the family physician many. Therefore, the early diagnosis and prevention of cancer of the cervix uteri is distinctly the duty and the great opportunity for service of the family physician. If he would help the propaganda for the periodic examination, he would see ten women where he is now seeing one, and he could educate them to the fact that leucorrhea is always potentially a dangerous sign because it is a symptom of the condition which is the forerunner of cancer."

ON THE CAUSES OF MATERNAL AND NEW-BORN DEATHS

When Doctor Litzenberg turns his spot-light of uncompromising truth upon the causes of death in maternity and among the new-born, his conclusions are equally revealing. "There is no excuse," he says, "for the present high deathrate in child-birth. If the medical profession could only be induced to apply the knowledge it already has, maternal mortality would be reduced by two-thirds and ten thousand or more mothers be saved (annually) to their families and to the community."

Doctor Litzenberg adds: "The two principal causes of maternal mortality are infection and eclampsia, both almost wholly preventable." He cites the records of the year 1925, discovering through the country 17,190 puerperal deaths, of which 11,180 were due to sepsis and toxemia; and declares again that "by applying the simple requirements of care during pregnancy and asepsis at delivery, thousands of these women need not have died."

Again, too, he emphasizes the large hope that lies in preventive measures: "By pre-natal care," he says, "eclampsia can be almost entirely eliminated, to say nothing of the abortions, the prematures, and the stillbirths which may be prevented. Nevertheless only a small percentage of pregnant women receive such aid, because physicians are not insisting upon it.

"I know that many, especially country physicians, say the women won't come for it. If they won't, it is the fault of the practitioner,—he fails to educate them to the importance of it. I know numbers of rural physicians who are proving that ante-partum care can be carried out in country practice just as thoroughly as in city prenatal clinics. They tell me that the farmer's wife appreciates it, and will come regularly for her examinations; that it has been the greatest single factor in building up a good practice.

"No physician has a right to accept women for confinement if he will not give them prenatal care and if he does not, he belongs to the class who are causing the high maternal mortality.

"And then, too, it is not only the mothers who are lost, but the babies who are born dead or die in the first week of life because of the lack of prenatal care, among the outstanding accomplishments of which is the prevention of prematurity, stillbirths and these very early deaths; and yet because the medical profession will not generally adopt this life-saving procedure, prematurity increased by ten per cent, or 1,528 additional deaths, in 1925, over the number recorded in 1915.

He adds, "In childbirth, as in cancer, the obstetrician cares for the few and the general practitioner the many, so here again is the family physician's great opportunity for service and life saving."

A CORROBORATION OF THE FACTS OF MATERNAL AND NEW-BORN DEATHS

In the July *News Letter*, issued by The American Child Health Association, we get immediate corroboration of Dr. Litzenberg's statements. It refers, first, to our national complacency over the annual deaths of 16,000 mothers in childbirth or as its direct result.

Victor Heiser, of the International Health Board of the Rockefeller Foundation states that the United States enjoys the reputation of a higher maternal mortality than any country *excepting India.*

To the loss of so many valuable adult human lives is to be added the prevalent stillbirth of the babies of the mothers who die in labor.

The Children's Bureau tells us that of the babies who are alive at birth, but whose mothers die, four times as many give up the struggle to survive as succumb when the mothers live for a year or more after their birth.

THE INFANT MORTALITY RATE

Dr. E. C. Hartley, Director of the Child Hygiene Division of the Minnesota State Board of Health, in a recent article contributed to *The Minnesota Nurse,* discusses the improvement that has come and that still must be achieved in the infant mortality rate of this State and the country at large.

Suggesting that an epidemic, carrying with it a mortality of ten per cent, would be regarded in the light of a major catastrophe, he goes on to show, from the vital statistics of Minnesota, during the past eighteen years, that the number of stillbirths, plus the number of infants dying under one year of age, averages very little less than ten per cent of the total number of births. The Table No. 1, following, shows fortunately that, from year to year, infant deaths in the first year of life grow materially less while the stillbirths do not. Table No. 2 is concerned with the death losses occurring during the first year of life and shows us very clearly (1) that betterment is principally due to the prevention and control of the diarrhoeal diseases of infancy; (2) that while variable responsibility attaches to the respiratory diseases, the variation is little more than a seasonal matter; (3) that miscellaneous death causes have in a measure diminished; while (4) fatal congenital and birth injuries have very greatly increased.

TABLE I

Year	Total births	Stillbirths	Deaths under 1 yr.	Total	Per cent of Total
1910	44,092	1,373	4,261	5,634	12.7
1915	55,233	1,603	3,871	5,474	9.9
1920	55,864	1,648	3,710	5,358	9.6
1925	53,756	1,637	3,226	4,863	9.0
1926	52,437	1,664	3,005	4,669	8.9
1927	50,789	1,514	2,632	4,146	8.1

TABLE II

Year	Congenital debility prematures, malformations, and birth injuries		Digestive system chiefly diarrheas		Respiratory system chiefly the pneumonias		Other causes	
1910	1,295	30.4	1,233	29.0%	609	14.3%	1,124	26.4%
1915	1,929	50.	598	15.4%	632	16.3%	712	18.3%
1920	2,040	55.	484	13.1%	413	11.1%	773	20.8%
1925	1,871	58.	326	10.1%	415	13.4%	614	19.1%
1926	1,692	56.3	287	9.6%	403	13.5%	619	20.6%

Dr. Hartley definitely attributes the gain to improvements in infant-feeding. This is putting it rather mildly. This change in the death-rate from diarrheal diseases in infancy is among the most significant that modern medicine has witnessed. Those of us who struggled through the period of its accomplishment know that the movement was a fairly revolutionary one, and related alike to infant foods and to methods of feeding.

On the other hand, the great increase in death losses from the first group of causes presents a problem far more difficult to solve. Dr. Hartley thinks the failure of its solution may be traced to "the lack of prenatal care, with all that prenatal care stands for." Our best hope is, as Dr. Hartley says, that "prenatal care has in it something of the same possibilities" that other "public health measures" have had in the control of contagious disease. Undoubtedly this hope is accentuated by the fact that "effective prenatal care demands constant, vigilant co-operation between the public and the medical profession" and that a good "medium for this coöperation exists in the public health nurse." A coördination of the service of the medical and the public health worker is certainly essential to the fruitful education of the public in the intelligent employment of prenatal care.

It is probable, however, that before we can expect much by way of mitigation of the havoc these particular death-causes work, much more of their origin and of the nature of the conditions underlying them must be known.

PLEAS FOR PERIODIC HEALTH TESTS

In these papers, so reviewed, three distinct pleas are made for the periodic health examination: the plea for the early detection thereby of a fatal form of cancer; the plea for the prevention thereby of one of the most common causes of maternal death; and, at the same time, the plea for the avoidance thereby of one of the most frequent occasions of abortion, premature birth, and fetal death.

The prenatal precautionary practice of to-day gives us one of the best illustrations of effective periodic health examination. Hardly may we find better evidences of its saving grace than we see daily in the prenatal and the well-baby clinics. Why should we be so hesitant of, so averse to its extension to every age and condition of life? Why should we wait for the development of disease to give rise to complaint of disturbed health before we protect the doctor's clients by so safe, so sound, so simple a sort of health assurance?

RICHARD OLDING BEARD, M.D.

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THE AMERICAN DENTAL ASSOCIATION

Another great convention has come to Minneapolis and has returned its members, its domestic and foreign guests, its staff of dental hygienists and assistants and its visiting friends and families to their homes, well satisfied with the professional entertainment and the civic hospitality they have received.

Thanks to the attractions of the Municipal Auditorium, Minneapolis has enjoyed the notable experience since last October of entertaining, in turn, the American Medical Association, the American Hospital Association, the International Rotarians, the National Educational Association, and, now, the American Dental Association.

The registration roster of this last great group numbered 8,300 people. It held its general sessions in the big auditorium, its section meetings in accessory audience rooms on the lower level floor, its commercial and health exhibits on the main street deck, and its committee meetings in convenient quarters. It was well housed, well fed, well entertained. It adhered to the wise policy of making its professional program its central and commanding feature. Its members came here for educational contact with their fellows, and they got it. Its many clinics were admirably conducted and well attended. Its exhibits were handsomely set up and attracted a host of interested observers.

Its president, Dr. Roscoe H. Volland, of Iowa City, used the opportunity of his annual address to excellent purpose. He put his major emphasis upon preventive dentistry, upon public health service as the ideal and the popular demand of the day. He sensed the fact that if his profession is to continue fitly to serve the people, it must give the people what they want, not merely the remedial or reparative treatment they may need, but dental health, the preservation of the normal architecture of the mouth, the integrity of a sound armature of teeth from birth up, the promotion of the functional relations of the mouth to body asepsis, to digestive power, to adequate breathing through the normal nasal portals of respiration, and to correct vocal exercise.

To put it in appropriate dental terms, Dr. Volland "put teeth" into his proposal by recommending additional and adequate appropriations by the national organization for the support of public health work in dentistry.

The Association could not do better than to make grants of money to support its preventive measures in large centers of population and especially at points where city and county offer distinctive problems which may be concurrently solved.

Such centers can be found in which the dental profession and its allies have already set the pace of service. Minneapolis, in the County of Hennepin, is one of these. The educational efforts of the District Dental Society in the public schools, the maintenance of its mouth health program, its promotion of settlement clinics, its support of free or partially free service for the indigent in need of dental help have been carried on consistently and in fine spirit.

It has been backed by an active women's auxiliary which has aided in the establishment of the dental clinics; has provided a $500 Scholarship Fund for the benefit of needy students at the University of Minnesota; has appropriated money to the District Society for the promotion of preventive dental work; has manned an oral hygiene booth at the State Fair, and has contributed supplies to the Glen Lake Sanitarium: the Red Cross Service; the Maternity Hospital; and the Needlework Guild.

THE DISTRIBUTION OF DOCTORS AND NURSES

There has been no end of worry over a supposed scarcity of physicians and nurses. There isn't any such lack.

A substantial volume, recently published by the Joint Committee on the Grading of the Schools of Nursing, and written by its able Director, Dr. May Ayres Burgess, demonstrates, with the full weight of a mass of testimony, gathered from eight to twelve different states, in all quarters of the country, not only that no shortage, but instead a large surplus, of private duty nurses exists; that, as a matter of fact, the hospitals generally, for the benefit of their own low-cost nursing services, have overstocked the land at large with more bedside-duty nurses than their communities have any need of.

Authorities in nursing education have long known that there are many more schools of nursing, and too many of much lower grade, than there is any good use for. More than that, there is good reason to believe that a large number of these schools do not serve as the economic legs upon which their hospitals stand, but instead as a rather poor sort of crutches upon which they hobble along to a growing economic inefficiency.

Of course there are high grade schools, giving their students in nursing the high grade education which the profession demands and of which would-be nurses should avail themselves in increasing numbers. An intelligent choice of schools offering adequate training; a better selection by the schools of student material; a higher preparation for service, and particularly for the advanced grades of nursing service, are the needs of the hour.

The same conditions do not obtain in the older field of medical education. The inferior schools have been, for the most part, eliminated. The standards of teaching in medicine call for revision; methods of instruction need modernizing; but there is no apparent glut of medical schools to-day. Neither is there any very well recognized or demonstrated call for more doctors. Such a survey as Dr. Burgess has made for the nursing profession, applied to the profession of medicine, would doubtless discover a financially unsupported surplus.

The trouble is not with the numbers of doctors or of nurses on demand. It is purely a matter (1) of the better distribution of the supply of both and (2) of the readjustment of the rewards of service to the economic needs of the communities served. The large cities cannot continue to absorb a superfluous supply of physicians and nurses, or to set an unchanging standard of professional hours of service or of professional fees. But how is the tendency to be helped or hindered?

The survey into the conditions of present-day medical service for all economically conditioned classes of the people to be directed by Dr. C. E. A. Winslow, of Yale University, is going to reveal a number of interesting things. It should and doubtless it will concern itself with the question of the community distribution of doctors, with the surplus in the cities, with the scarcity and the poverty of them in the rural districts.

No missionary propaganda in behalf of medical service in the small towns and villages will get anyone anywhere. It is purely a matter of making rural practice and rural residence attractive to medical graduates. It can be done.

The small community hospital, modernly planned, electric lighted, properly plumbed, equipped for up-to-date practice, furnished with a clinical laboratory, supplied with a trained technologist, put in charge of a trained graduate nurse, is the key to the situation.

Add to all this a guarantee by the community of a minimal salary for the doctor and his staff, and, in most instances, the trick would be turned.

The young physician wants a chance to do an up-to-date practice, wants the expectation of a decent living, wants the use of modern conveniences, wants the chance of consultation and conference with sufficiently nearby colleagues. There will be competent takers for that sort of an opportunity.

It goes without saying that the community, so seeking and so providing for medical and nursing service, will expect ability. I should exercise a careful choice of candidates. It should open up to them the avenues to community service in the school, the local office of public health, the homes of the people. It should see to it that it does not nourish a Main Street type of doctor; and it should see to it, too, that the big medical fees do not go to the large cities. It should cultivate and compensate professional merit right at home.

THE MINNEAPOLIS COUNCIL AND THE DOG QUESTION

Again the emotional rather than the logical side of a question is up before the City Council of Minneapolis, the question of rabid dogs—if there be any. The Council evidently thinks there are no rabid dogs in the city; let us hope the Council is right. At the same time they employ a commissioner of health who is an expert on the diseases of humans and animals, who is taking every precaution to prevent rabies in this hot weather, and yet the Council has turned him down very flatly and has made some very stringent and ridiculous rules about the dog question. It has with great equanimity provided that the dogs may live three days after being captured, whatever kind of dogs they may be—mongrel dogs, dogs without good antecedents, or dogs afflicted with skin diseases. No matter what manner of dog he may be, he is not to be killed until they want him killed. The matter is not left to the discretion of the Commissioner of Health, but the responsibility and direction of the whole affair is assumed by the City Council. Of course, some members of the City Council are very reasonable men and are willing to accept reasonable advice, but the majority of them are unreasonable and know nothing of disease. The editor thinks he can make that statement without fear of any criticism whatsoever. We are willing to offer a little bonus to the member of the Council who knows how to pronounce *rabies* or *hydrophobia*, and can define its origin, its source, and its dangers. We further venture the remark that there are some members of the Council who never heard of it, and who would not know a mad dog if they met him on the street.

It is not only the height of impertinence but the depth of ignorance for a city to employ a health commissioner ostensibly for his advice on medical matters and then ride over him roughshod when he advises precautionary measures. It occurs to us that there are many stray dogs in the country, and they are always a menace. They may be afflicted with skin diseases, infested with vermin, or in other ways unclean or diseased. And these dogs may, under certain conditions, develop rabies at any time.

The stamping out of an epidemic of rabies is a very difficult problem; when it is once started it is almost impossible to stop it. So if any of the Council members or the children of any of the committee members are liable to be bitten by rabid dogs they had better consider the question very carefully before they go against the advice of a trained health officer, who is also a scientifically trained physician. There ought to be a law passed whereby the city health department and the state board of health may co-operate. Then perhaps the Council would sit up and listen; otherwise they are hopeless, especially when it comes to injecting medical questions into their Council meetings. The loss of a stray dog or two of unknown origin and unknown caliber is surely of less importance than the spreading of rabies, and the possibility of the latter should make the Council pause and consider what may happen. It is our contention that every dog should have an examination by a veterinarian every so often for evidences of disease, just as our people of the enlightened classes are looked over by their medical advisors. Perhaps it would then be possible to discover such an epidemic before it started; and if the epidemic had started, the suspected dogs would either be confined or put out of the way and the likelihood of becoming rabid. Surely a dog's life, at least the life of a dog of that type—the stray, mongrel dog that has no owner and finds his living by eating slops and garbage—is a greater menace to the community than the innocent child who may be bitten by a rabid dog. Why does not the Council call in the Hennepin County Medical Society, if it is so positive of its own knowledge, and get some insight into the dangers of allowing these suspected dogs to be at large. Even the antivivisectionists are joining with the Council, and are denying the existence of rabies. We wonder if a councilman ever met an antivivisectionist? If he did the writer thinks he would be very much amused by what he heard, and it might do him some good.

It has been observed that a dog sometimes may have rabies and the veterinarian or other people in charge of the dog have no knowledge of it or any explanation for it. The dog may be without fever and without frothing at the mouth, the favorite lay methods of diagnosing rabies. The average rabietic dog is said to live two weeks, and during that time he can inflict an enormous amount of harm, and it is only when the situation is taken into consideration very carefully and by a competent man that rabies may be stamped out in six weeks. In the meantime, what becomes of rabid dogs or the rabid patient? The rabid dog does not fear water, as is commonly supposed. And, incidentally, the tourist who comes through the country may bring the rabid dog into a vicinity, not intentionally, of course, but without knowing what it means. The *Northwestern Health Journal* suggests that if a rabid dog dies the head should be packed in ice and promptly sent to the State Board of Health for a definite diagnosis.

THE FORTY-SEVENTH ANNUAL SESSION OF THE SOUTH DAKOTA STATE MEDICAL ASSOCIATION

The Forty-seventh Annual Session of the South Dakota State Medical Association was held at Hot Springs on August 7, 8, and 9 with headquarters at the Evans Hotel, where the registration was conducted. Col. Medbury, the manager, was solicitous of the comfort of his guests and made our stay one to be remembered.

Weather and road conditions were favorable, making it possible to make the trip by auto from all parts of the state. The men from the northeastern part of the state covered some 1,200 miles on the round trip; those from the southeastern and east central, in the neighborhood of 1,000 miles for the round trip. The distances, Hot Springs being in the extreme southwestern part of the state, cut down the average attendance, however those in attendance did not complain of the distances, as it gave them an opportunity to visualize the different sections of the state.

The sessions were well attended. The social side of the meeting was well planned and enjoyed by all. The local committee and the Governor of Battle Mountain Sanatorium, Col. E. R. Lindner, are to be congratulated upon the efficient manner in which they handled this session.

The House of Delegates held their first session, Tuesday, at 2:00 P. M. in the library of the Annex of the Battle Mountain Sanatorium. This was an ideal place for the business sessions of the Association, light and airy, with a north exposure. The Council held their first session Tuesday, at 8:00 P. M. The second session of the House of Delegates was held Wednesday morning at 7:00 A. M. and was well attended. The early hour appealed to the House of Delegates in order to expedite the business of the Association.

A dinner for the past presidents and officers was well attended. Messages of regrets from several were received. We have twenty-two living past presidents, and the honor of this meeting goes to Dr. H. G. J. Koobs, who is now located at Rodgers, Arkansas, and traveled some 1,800 miles to attend this meeting. Dr. Koobs is just as enthusiastic as ever over the possibilities of the State Association. Our President, Dr. S. M. Hohf, acted as toast master. Dr. T. B. Smiley, of Mt. Vernon, was the Dean of Past Presidents present at this meeting, and had the seat of honor at the table. Dr. R. T. Dott, the Dean of Past Presidents, was unable to be with us.

The material presented for the scientific session by Col. Lindner, Governor of Battle Mountain Sanatorium, was adequate and elicited the interest of all, which was evinced by the questions asked from the floor. Dr. R. E. Woodworth, of the State Tuberculosis Sanatorium, gave a valuable and timely paper, "The Patient, The Doctor, and the Sanatorium." In closing, Dr. Woodworth invited all the doctors to visit the State Sanatorium at Sanator and become better acquainted with the institution.

H. J. Holmquist, B.S. (M.E.) Executive Secretary, Council on Physical Therapy, A. M. A., gave a paper which was very timely, giving the medical men certain landmarks by which to govern our activities with these remedial agencies which are just as potent as the alkaloidal drugs of the pharmacopea, and should be as adequately standardized, in order that the doctor may have definite knowledge of their therapeutic and toxic doses.

Dr. J. M. Dodson, Secretary of the Bureau of Public Health and Education, A. M. A., was with us during the session and gave a most interesting lecture the evening of Wednesday, August 8, to which the public was invited.

South Dakota was criticized by Dr. Dodson for being "one of six or seven states in the Union without an adequate law for birth registration."

Dr. Dodson pointed out that adequate birth registration is a measure of justice to children, proving later their right to work, marry, be citizens, hold office, go to school, inherit property or secure passports. He also stressed the importance of preventive medicine, including encouragement of the public to have examinations.

"Only in this way," he declared, "Can the value of the old family doctor be continued in a day of specialists. A doctor must be a health advisor. Many of the old ills do not exist, and the duty of today's doctors is to ward off those which come from strenuous living."

Officers elected were: Dr. N. K. Hopkins, Arlington, president; Dr. L. N. Grosvenor, Huron, first vice-president; Dr. Percy D. Peabody, Webster, second vice-president; Dr. W. A. Bates, Aberdeen, third vice-president; Dr. J. F. D. Cook, Langford (re-elected) secretary-treasurer for three years; Dr. T. F. Riggs, Pierre, delegate to the American Medical Association, with Dr. Hohf, alternate. Councilors: Dr. H. R. Kenaston, Bonesteel; Dr. A. E. Bostrom, DeSmet; and Dr. Charles Flett, Milbank, (elected for a term of three years). Mitchell was awarded next year's meeting.

Mrs. Percy D. Peabody, Webster, was elected president of the Women's Auxiliary; Mrs. H. R. Kenaston, Bonesteel, second vice-president, the first vice-president to be appointed; and Mrs. N. K. Hopkins, Arlington, secretary-treasurer. Committees were appointed to organize the doctors' wives by districts and to outline a yearly activity program.

Thursday, 8:00 A. M., Dr. Harold Gifford, of Omaha, Neb., read a paper on "Common Diseases of the Eye."

Thursday, at 10:00 A. M., the physicians and their families formed an auto caravan and started for the northern hills, making a stop at the State Park Inn for Luncheon, then proceeding by way of the Needles, Sylvan Lake, and Hill City to Lead and Deadwood for the "Days of '76." Some of the party returned to Rapid City, others continued on through to Spearfish Canyon, to Spearfish, and Belle Fourche, where the largest Earthen Dam holds the waters for this irrigation district, which compares with similar irrigation projects in Colorado and Nebraska. The largest pickling vats in the world are at Nisland, with sugar beets and sugar plant at Belle Fourche.

J. F. D. Cook, M.D.

MISCELLLANY

WILL LIFT THE APPREHENSION OF DISEASES

That remarkably well-edited daily paper, *The Christian Science Monitor*, calls attention in a recent editorial to a promise in the Democratic Party platform which, no doubt, many Democrats and Republicans have overlooked. It is a promise to "spare no means to lift the apprehension of diseases from the minds of our people," even though the platform stulifies itself in the next paragraph. *The Monitor* says:

> While much has been written regarding the Democratic Party platform, particularly from the standpoint of prohibition and the farmer's problem, but little notice seems to have been taken of one paragraph dealing with the significant subject, "Public Health." Starting, apparently innocently, with the words, "The Democratic Party recognizes that not only the productive wealth of the Nation but its contentment and happiness depend upon the health of its citizens," the platform goes on, not nearly so innocently, to state, "it therefore pledges itself to enlarge the existing bureau of public health. . ." Further, it declares that it pledges the party to "appropriate all monies necessary thereto to carry out" its pledge.
>
> With one sentence in the plank it is possible to express complete accord, that, namely, wherein the assurance is conveyed that the party will "spare no means to lift the apprehension of diseases from the minds of our people." When, however, consideration is given to the fact that the policy advocated is of a nature to do the exact opposite of this, in that enlargement of the sphere of public health activities tends to arouse the very apprehension of diseases which it is claimed to be the intent to pacify, it is difficult to see wherein any constructively worthwhile results can be expected. Enlarging the United States Bureau of Health into a Department of Health has long been an object aimed at by those keenly interested in forwarding the medical activities of the United States. In view of the intense opposition to such a proceeding felt by many, however, any steps taken or anticipated in this direction may well be closely watched.

NEWS ITEMS

Dr. John F. Quinn, formerly of Gregory, S. D., has located in Philip, S. D.

Dr. T. J. Strong, who formerly practiced in Enderlin, N. D., has returned to that city and resumed practice.

Dr. W. E. Dickinson, formerly of Canistota, S. D., has become associated with the State Hospital at Lincoln, Neb.

The voters of Britton, S. D., gave a vote of 327 to 27 in favor of a second bond issue to complete its new hospital building.

An editorial notice of the really great dental association meeting held in Minneapolis recently appears on another page of this issue.

Dr. O. H. Warner, of Brookings, S. D., has moved to San Diego, California, to join a large clinic which conducts a large emergency hospital.

Dr. J. A. Hielscher, of Mankato, will erect a building in the northern part of Mankato which he will call the Northtown Clinic Building.

The Southern Minnesota Medical Association will meet in Rochester on October 2 and 3. We shall publish its program, in part or in full, in our next issue.

Dr. M. C. Johnston, of Aberdeen, S. D., has been appointed part-time health officer of that city to succeed Dr. Paul McCarthy, recently resigned as full-time health officer.

Dr. A. T. Laird, of Nopeming, Minn., accompanied by his wife, has gone to Europe for a couple of months. He will attend the International Tuberculosis Conference in Rome.

Dr. Gustav A. Eisengraeber, of Granite Falls, Minn., died last month at the age of 70. Dr. Eisengraeber was a graduate of the University of Minnesota Medical School, class of '91.

Dr. D. E. McBroon, senior physician of the staff of the school for feeble-minded, at Fairbault, has been appointed Superintendent of the Colony for Epileptics at Cambridge, Minn.

Dr. J. C. McKinley, accompanied by his wife and four children, has gone to Europe for a year. Dr. McKinley will spend most of the year in Breslau, Germany, in research work.

Minneapolis is having a mild rabies scare. Secretary A. J. Chesley, of the State Board of Health, has sent a warning to all health officers in the state to be on the lookout for evidence of the infection.

Dr. I. C. J. Wiig, who formerly practiced in Wahpeton, N. D., for ten years, died in Lauderdale, Florida, last month at the age of 64. Dr. Wiig was a graduate of Hamline, class of '96, and went to Florida in 1925.

Drs. P. G. Arzt, Jamestown; E. A. Pray, Valley City; and W. H. Miller, Grand Forks, have been appointed commissioners to carry out the law permitting sterilization of the feeble-minded and insane in North Dakota State institutions.

Dr. Max W. Barbour, of Helena, Mont., died last month at the age of 56. Dr. Barbour was a graduate of the Medical College of Ohio, class of '97, and had practiced in Helena since 1907. He was prominent in medical, business, and social circles.

An erroneous report has gained circulation stating that Dr. O. C. Gaebe has moved from New Salem, N. D., to Carpio, N. D. Dr. Gaebe says that is a slight mistake. He has been in New Salem for twenty years and has settled down for twenty years more in the same place.

The public health laws of the State of North Dakota, with the rules and regulations of the State Department of Health, have been published in a 90-page pamphlet, which, we are told, has been issued in a limited edition. Certainly no physician in North Dakota should be ignorant of such laws and regulations.

The Inter-State Post Graduate Assembly of North America holds its next annual assembly at Atlanta, Ga., on October 15-19, inclusive. The only men from the Northwest whose names appear on the program are Drs. Balfour, Vinson, Hunt, Bollman, Snell, and Mayo (C. H.) of the Mayo Clinic. The program is an attractive one.

At the annual meeting of the Northern Minnesota Medical Association held at Fergus Falls last month the following officers were elected: President, Dr. M. O. Oppegaard, Crookston; vice-president, Dr. W. L. Patterson, Fergus Falls; secretary-treasurer, Dr. O. O. Larsen, Detroit Lakes. Next year's meeting will be held at Bemidji.

At the U. S. Army medical examination, held at Manila, Dr. L. Z. Fletcher, who was born and reared in Melrose, S. D., obtained the astounding average of 98.44 per cent, said to be the highest grade on record obtained in such an examination. Dr. Fletcher was a graduate of the Northwestern University Medical School of Chicago, class of '16.

At the annual meeting of the State Board of Health of South Dakota last month Dr. A. C. Clark, of Woonsocket, was elected president, and Dr. J. H. Bartron, of Watertown, was elected vice-president. Dr. H. R. Kenaston, of Bonesteel, holds over as director of medical licensure, and Dr. Park G. Jenkins was recently appointed by the Governor superintendent for five years.

The Minnesota State Board of Medical Examiners has issued, in pamplet form, a "List of Persons Authorized to Practice Medicine in the State of Minnesota." As the "List" will be kept up to date by quarterly supplements it becomes invaluable to a great many people, and the Board deserves thanks for the service it will render the medical profession of Minnesota and neighboring states.

Dr. Frederick G. Kohler, of Minneapolis, died on August 2, at the age of 52. Dr. Kohler was a graduate of the Minneapolis College of Physicians and Surgeons, class of '97, and practiced in Hector and Stewart, Minnesota, for twelve years, when he joined the U. S. Medical Corps in the World War. After the War he became associated with his brother, Dr. C. H. Kohler, in Minneapolis, where he practiced until his death.

A three-day conference on tuberculosis, child welfare, health education, publicity methods, Christmas Seal sales, public health nursing, and community organization will be held at Des Moines, Iowa, on September 17, 18, and 19, under the auspices of the Mississippi Valley Conference on Tuberculosis and Public Health and the Mississippi Valley Sanatorium Association. Dr. E. S. Mariette, Superintendent of the Glen Lake (Hennepin County) Sanatorium, president of the Sanatorium Association, will preside at the latter meetings.

Locum Tenens Work Wanted

By a middle-aged graduate of an A1 medical school. Available at once. Address 508, care of this office.

Half-Time Laboratory Work Wanted

In Minneapolis by a thoroughly competent technician with highest of references. Address 511, care of this office.

Experienced Technician Wants Work

Have had large experience in office work; in giving physiotherapy; and in *x*-ray work under a high-grade man. Address 518, care of this office.

Minneapolis Location for Physician

Have fine location for a physician in South Central District of Minneapolis. New building in a very fine locality. See A W. Scherven, 3763 Bloomington Avenue South; Drexel 2248.

Partner Wanted

Will sell half my practice in a good town near the Twin Cities at a reasonable price. Hospital connection. Prefer internist. Practice established twenty years. Address 522, care of this office.

Office Work in Minneapolis Wanted

A young woman, tactful and conscientious, desires position with a group of physicians or surgeons in Minneapolis. Several years experience. Knowledge of stenography and filing. Best of references. Address 523, care of this office.

Physician Wanted

At once, young doctor for contract mining practice at Crosby, Minn. Salary $200.00 per month with car and lodging furnished, or $250.00 per month and lodging if doctor furnishes his own car. Address Dr. F. A. Allen, Crosby, Minn.

Physician Wanted

A physician is wanted to take over a practice in a prosperous Minnesota agricultural community. Town of 800 and with one other physician. Should net at least $5,000 cash annually. Scandinavian preferred. Address 524, care of this office.

For Rent

Physician's and Surgeon's office. New building, 3805 Nicollet Ave., Minneapolis. Waiting room in common with established dentist. Rent reasonable. Apartment in conjunction if desired. Address or call upon Drs. Gerde and Bruss, 608 Besse Bldg.

Practice for Sale

An $8,000 to $10,000 medical and surgical practice in a town of 500 population, large farming community and no competition. Am going to England about September 1. Some equipment for sale at reasonable price. Get in touch immediately with Dr. E. W. Whitcomb, Cresbard, So. Dak.

Fine Location for a Physician and a Hospital

A prosperous Minnesota town of 1,000 population and within 30 miles of Minneapolis needs a hospital and offers an opening for a physician. I will sell or rent my splendid brick house in this place. Place has a large and beautiful yard. House easily convertible into a hospital. Address 514, care of this office.

Practice for Sale in Minnesota

A Park Region (Minnesota) unopposed $5,000 cash practice; town 800 population; good schools; highway open all winter; hospital facilities for surgery. Modern seven-room house with sun parlor, sleeping porch, office rooms with separate entrance, double garage for $2,500. Am joining a clinic. Address 520, care of this office.

Technician Wants Position

Registered *x*-ray technician, experienced in clinical laboratory, physical therapy, and metabolisms; also an experienced bookkeeper and typist who is capable of taking entire charge of the business and is desirous of obtaining a position in clinic or doctor's office as technician or bookkeeper. Thoroughly competent. Address 519, care of this office.

EXAMINATION REPORT, MINNESOTA STATE BOARD OF MEDICAL EXAMINERS, JUNE, 1928

BY EXAMINATION

Name	School and Date of Graduation	Address
Alexander, Fay Knight	Univ. of Minn., M.B., 1928	401 10th Ave. S. E., Rochester, Minn.
Beiswanger, Richard H.	Univ. of Minn., M.B., 1928	Mpls. Gen. Hosp., Minneapolis, Minn.
Berke, Raynold N.	Univ. of Minn., M.B., 1928	1773 W. Minnehaha, St. Paul, Minn.
Bradford, Carl William	Marquette, M.D., 1928	St. Joseph's Hospital, St. Paul, Minn.
Browe, Evelyn Lillian	Univ. of Minn., M.B., 1927	2649 Johnson St. N. E., Minneapolis
Brownstone, Manuel	Univ. of Manitoba, M.D., 1928	St. Mary's Hospital, Minneapolis
Bruenner, Berstram	Univ. of Minn., M.B., 1928	304 S. Brimhall Ave., St. Paul, Minn.
Cameron, Isabell Logan	Boston Univ., M.D., 1918	346 Penn Ave. N., Minneapolis
Claydon, Donald Robert	Univ. of Louisville, M.D.. 1926	Medical Blk. Clinic, Red Wing, Minn.
Clothier, Elton Forrest	Univ. of Minn., M.B., 1928	3431 Chicago Ave., Minneapolis
Cohen, Summer S.	Univ. of Minn., M.B. & M.D.. 1928	Mpls. Gen. Hosp., Minneapolis, Minn.
Curran, Frank Joseph	Univ. of Minn., M.B., 1928	2200 Cedar Ave., Minneapolis, Minn.
Davee, Chalmer	Univ. of Minn., M.B., 1928	603 Delaware St. S. E., Minneapolis

EXAMINATION REPORT—Continued

BY EXAMINATION

Name	School and Date of Graduation	Address
Davenport, LaMar Hay	Univ. of Pa., M.D., 1926	Mayo Clinic, Rochester, Minn.
Donald, Joseph Marion	Tulane Univ., M.D., 1925	Mayo Clinic, Rochester, Minn.
Drenckhahn, Charles Hilbert	Univ. of Minn., M.B., 1928	329 Union St. S. E., Minneapolis
Edwards, Gordon C.	Univ. of Manitoba, M.D., 1928	2122 Lyndale Ave. S., Minneapolis
Elkins, Alfred John	U. of Minn., M.B., 1927, & M.D., 1928	3350 N. Knox Ave., Minneapolis
Emond, Alber Joseph	Univ. of Minn., M.B., 1928	Miller Hospital, St. Paul, Minn.
Fallon, Madeleine Ann	Univ. of Minn., M.B., 1927	University Hospital, Minneapolis
Fetter, Ferdinand	Univ. of Minn., M.B., 1928	1043 Lincoln Ave., St. Paul, Minn.
Flanagan, Leonard Gervais	Univ. of Minn., M.B., 1928	603 Delaware St. S. E., Minneapolis
Folta, John	Univ. of Minn., M.B., 1928	2118 5th St. So., Minneapolis, Minn.
Fortney, Arthur C.	Wash. Univ., Mo., M.D., 1927	Miller Hospital, St. Paul, Minn.
Fransco, Peter P.	Creighton Univ., M.D., 1927	Ivanhoe, Minn.
Gilman, Abe Arthur	Univ. of Minn., M.B., 1928	1141 Thomas Ave. N., Minneapolis
Hagerty, Warren T.	Marquette, M.D., 1928	St. Joseph's Hospital, St. Paul, Minn.
Hansen, Cyrus Owen	Univ. of Minn., M.B., 1928	306 Park Ave., Bismarck, N. D.
Hesdorffer, Meredith Benjamin	Univ. of Minn., M.B. & M.D., 1928	500 Delaware St. S. E., Minneapolis
Hill, Frederick Charles	Columbia Univ., M.D., 1925	206 6th St. S. W., Rochester, Minn.
Hiniker, Peter Joseph	Univ. of Minn., M.B., 1927	St. Joseph's Hospital, St. Paul, Minn.
Howard, Laura Koon	Univ. of Minn., M.B., 1927	3239 Portland Ave., Minneapolis
Johnson, Andrew Richard	Univ. of Minn., M.B., 1928	1081 Hague Ave., St. Paul, Minn.
Karlins, Walter Howard	U. of Minn., M.B., 1927, & M.D., 1928	704 15th Ave. S. E., Minneapolis
Keegan, Agnes Marie	U. of Minn., M.B., 1927, & M.D., 1928	Mpls. Gen. Hosp., Minneapolis, Minn.
Kelby, Gjert M.	Northwestern, M.D., 1928	707 Phys. & Surg. Bldg., Minneapolis
Keyes, John Dwight	Univ. of Minn., M.B., 1928	510 Essex St. S. E., Minneapolis
Kumm, Frederick F.	Univ. of Minn., M.B. & M.D., 1924	400 9th St. S. E., Minneapolis
Laugeson, Lyder L.	Univ. of Minn., M.B., 1928	2526 E. Franklin Ave., Minneapolis
Liffrig, William W.	Northwestern, M.D., 1928	Goodhue, Minn.
Lippman, Emanuel S.	Univ. of Minn., M.B., 1928	109 Highland Ave., Minneapolis
Lipschultz, Oscar	Univ. of Minn., M.B., 1928	78 E. Dearborn St., St. Paul, Minn.
Litman, Abraham B.	Univ. of Minn., M.B., 1928	St. Mary's Hospital, Minneapolis
McBride, Wm. Percy Leon	Med. Coll. of Va., M.D., 1926	202 11th Ave. N. E., Rochester, Minn.
Madland, Robert Seymour	Univ. of Minn., M.B., 1928	655 Gotzian St., St. Paul, Minn.
Mead, Charles Henry, Jr.	Univ. of Minn., M.B. & M.D., 1928	515 Delaware St. S. E., Minneapolis
Miller, Hugo Eugene	Univ. of Minn., M.B. & M.D., 1928	316 17th Ave. S. E., Minneapolis
Moen, Johannes K., Jr.	U. of Minn., M.B., 1927, & M.D., 1928	3147 Cedar Ave., Minneapolis
Naegeli, Arnold Edward	Marquette, M.D., 1928	St. Joseph's Hospital, St. Paul, Minn.
Nelson, John Miller	Univ. of Minn., M.B., 1928	1515 Charles St., St. Paul, Minn.
Nelson, Kenneth Roy	Univ. of Minn., M.B., 1928	2119 Humboldt Ave. So., Minneapolis
Nethercott, Ernest Gilbert	Univ. of Minn., M.B., 1928	233 Kent Road, Duluth, Minn.
Norman, Irwin Louis V.	U. of Minn., M.B., 1927, & M.D., 1923	U. S. Naval Hospital, Chelsea, Mass.
Ormond, Douglas Thomas	St. Louis Univ., M.D., 1927	Correll, Minn.
Palmer, Carroll Edwards	Univ. of Minn., M.B. & M.D., 1928	329 Union St. S. E., Minneapolis
Prescott, Manfred U.	Univ. of Ill., M.D., 1923	Mayo Clinic, Rochester, Minn.
Puestow, Charles Bernard	Univ. of Pa., M.D., 1925	Mayo Clinic, Rochester, Minn.
Richardson, Russell B.	Univ. of Minn., M.B. & M.D., 1928	Waconia, Minn.
Rosekrans, Milton Charles	Univ. of Minn., M.B., 1928	New Asbury Hospital, Minneapolis
Schimelpfenig, Geo. Theo.	Univ. of Minn., M.B., 1928	3324 18th Ave. So., Minneapolis
Schoofs, Gregor Elmer	Univ. of Minn., M.B. & M.D., 1927	916 E. 15th St., Minneapolis
Schottler, Max Elliott	Univ. of Minn., M.B., 1928	Dexter, Minn.
Seth, Raymond Ephraim	Univ. of Minn., M.B., 1928	2840 W. River Road, Minneapolis
Strand, Elwyn Vincent	Univ. of Minn., M.B., 1928	Marine-on-St. Croix, Minn.
Vaccaro, Francis J.	St. Louis Univ., M.D., 1927	St. Mary's Hospital, Minneapolis
Waldron, George W.	Univ. of Minn., M.B., 1928	429 Union St. S. E., Minneapolis
Watkins, Charles Hamilton	Univ. of Minn., M.B. & M.D., 1928	University Hospital, Minneapolis
White, John Huffman	Univ. of Ore., M.D., 1926	Mayo Clinic, Rochester, Minn.
Wiechman, Frederick	Univ. of Minn., M.B., 1928	Freeport, Minn.
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Goforth, Clifford	St. Louis Univ., M.D., 1926	State Hospital, St. Peter, Minn.
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Lokke, Benjamin Richard	Rush, M.D., 1922	Egan, S. D.
Mroz, Rudolph John	Univ. of Ill., M.D., 1922	Mayo Clinic, Rochester, Minn.
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NATIONAL BOARD CREDENTIALS

Rynearson, Edward Harper	Univ. of Pittsburgh, M.D., 1926	Mayo Clinic, Rochester, Minn.

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ORGANOTHERAPY

The Journal of Organotherapy for July-August contains an eight-page supplement describing the handsome and commodious new laboratory and office building of the G. W. Carnrick Company at 20 Mt. Pleasant Ave., Newark, N. J., to which point they recently moved from 413 Canal Street, New York City. The growth of the company has required seven removals, each to a larger building. The present office and laboratory and office building have a frontage of 280 and 140 feet, respectively, with grounds covering an entire block for expansion.

The house publishes a bimonthly magazine of forty-eight pages about the size of The Journal-Lancet to furnish the student of internal medicine, that is, the general practitioner, a record of the progress in the study of the internal secretion and metabolism. It publishes original articles from the world's leading thinkers in these lines, together with abstracts of similar papers published in all parts of the world. It is published gratuitously and is a very interesting and informing magazine.

The products of their laboratory are led perhaps by Hormotone, but the list is a large one as the gland products have increased rapidly.

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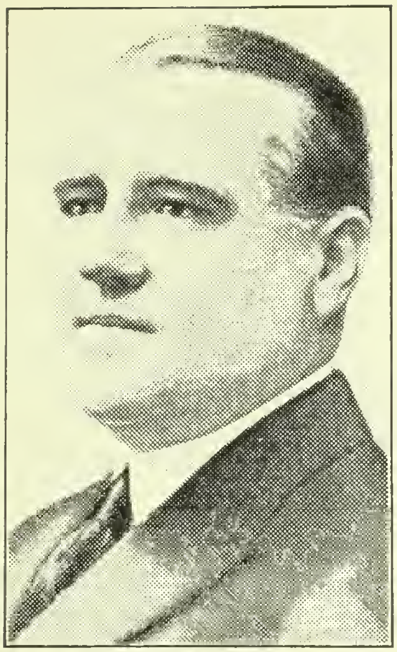

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DIABETES ON THE INCREASE

It is said that the consumption of sugar in the United States is about twice the amount per capita used in any other country. The use of sugar has also increased with prohibition, and quite in keeping with these statements is the fact that the diabetic death rate has more than doubled in the past decade. It would appear that there is a close relation between diabetes and overindulgence in carbohydrate food and that, despite the blessing of Insulin, diabetes is on the increase.

Eli Lilly and Company made available to the medical profession of the United States the first preparation of Insulin. This scientific achievement occurred over six years ago. During that time Iletin (Insulin, Lilly) has been instrumental in restoring to health and usefulness thousands of diabetic patients. Notwithstanding, there are to-day many physicians who hesitate to use Insulin. The physician should be able to make quantitative tests for the estimation of sugar in the urine. It is more practicable to have blood sugar tests made by some laboratory. He should understand diet and be in position to give patients proper dietetic instructions.

A method of procedure has been prepared that can be carried out very nicely by the family physician, often with benefit, in the treatment of the uncomplicated case of diabetes mellitus. Information on this subject can be obtained from Eli Lilly and Company, Indianapolis. There is no reason why every sufferer from diabetes who needs Insulin should not have it, and it is a severe indictment that, with such a specific at hand, the death rate from this malady should continue to mount.

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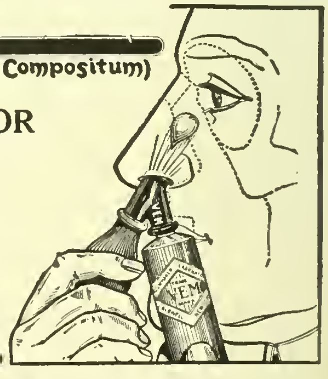

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MENINGITIS DUE TO MICROCOCCUS CATARRHALIS*

REPORT OF TWO CASES

By FREDERICK P. MOERSCH, M.D.
AND
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Sections on Neurology and Clinical Pathology, The Mayo Clinic
ROCHESTER, MINNESOTA

Since Pfeiffer's description of *Micrococcus catarrhalis* it has been assumed that it possesses a low virulence and that it affects children in preference to adults. Alone or in conjunction with other organisms, it has been found to be the cause of respiratory-tract infections, sometimes in association with mastoiditis. Further reports have appeared, showing that the organism possesses at times fairly marked virulence, and that it is frequently found to be the cause of bronchopneumonia and pneumonia, especially in children. Several cases of septicemia have been reported in which the organism was positively identified in blood cultures. Recovery was reported in one case of septicemia, by Nagell.

On several occasions the organism has been the etiologic factor in rather localized epidemics, which were at first considered to be mild outbreaks of influenza. Isolated cases in these epidemics proved fatal.

In 1908 a case of meningitis, due to *Micrococcus catarrhalis*, was reported by Barker. More recently Lemaire, Sales and Turquety reported two cases occurring in infants, and stated that this type of meningitis is common among infants. Proof of this statement was not found in the literature.

A careful search of the literature revealed about eleven cases of meningitis due to *Micrococcus catarrhalis;* in three of these there was bacteriologic proof; the remaining eight cases are open to suspicion, although it may be accepted that this organism was the etiologic factor. In five cases children were affected; in two cases adults were affected, and in four the age of the patient was not given. In this group of eleven cases one patient recovered.

The outstanding features of these cases of meningitis are the prolonged course of the affection, the mild character of the symptoms and the fluctuating course. Garland's patient lived one hundred and two days, and one of our patients lived five months.

REPORT OF CASES

CASE 1.—The patient, a woman, aged thirty-one, was perfectly well up to November, 1927 (eight weeks prior to registration), at which time she contracted what was thought to be influenza. The illness was characterized by a general feeling of malaise, moderate fever, and aching pains over the body, but more especially of the joints of the extremities. The joints were not red or swollen. The patient was advised to go to bed, and, a few days later, a macular rash appeared over the entire body; this cleared away after three days. For a time she seemed to improve, but three weeks after the onset of the illness a severe, sudden, sharp, frontal headache, with fever of 104° developed and lasted seventy-two hours; this was followed by dull headaches, three or four times weekly, lasting from eight to ten hours, and associated with cervical and dorsal pains and nausea, and later with projectile vomiting. Five weeks after the onset of the symptoms, the headache became more constant, the neck became rigid and painful, and several attacks of earache occurred. The temperature varied from 100° to 103,° nausea was present on slightest movement of the head, and at times transient diplopia with blurring of vision and marked photophobia was noted. The vomiting gradually increased, but was not projectile. The patient complained of aching and tender calves, she slept poorly, and sometimes had frightening and terrifying delirium with fever.

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*Submitted for publication August 13, 1928.

Examination.—The patient was admitted to hospital January 4, 1928. She was markedly emaciated, having lost twenty pounds. The face was flushed, the skin dry and hot. She was apathetic, complained of photophobia, and did not wish to be moved, as movement precipitated nausea and vomiting. General examination showed little of consequence. Roentgenograms of the chest showed bronchiectasis at the lower border of the heart. The urine contained a trace of albumin. The temperature was 102,° the leukocytes numbered 10,800. The blood Wassermann reaction was negative. A roentgenogram of the head was negative. Neurologic examination showed the patient to be hypersensitive. The neck and spine were rigid, with pain on movement. There was slight vertical and horizontal nystagmus. The pupils were normal. The fundi showed a choked disk of 2 to 3 diopters with several small hemorrhages. All the deep reflexes were active; plantar response was flexor in type. Muscular power was generally diminished, with considerable tenderness on pressure. Spinal puncture showed fluid under slight pressure, 197 small lymphocytes, 16 large lymphocytes, and 246 polymorphonuclear leukocytes. The Wassermann reaction was negative and the Nonne positive.

Course of the disease.—During the first month in the hospital, the temperature mounted to 102° or 103° every other day, with a slight chill. Occasionally, the chills occurred daily; again there might be a few days during which the temperature remained sub-normal. For a time it seemed that the patient was improving; the headaches were less severe, and she began to eat fairly well. Spinal drainage was carried out on an average of four or five times a week, and the patient usually felt better following the puncture.

During the second month in the hospital the condition fluctuated. During the first week the patient seemed much better. She had only a few chills, and the temperature never went above 101.° Later in the month vomiting returned, and she could not retain anything on her stomach. Glucose was given intravenously, and February 23 nasal feedings were instituted. At this time death seemed imminent, but the patient rallied. During the month of March she did not have chills; the temperature remained subnormal up to the time of death (March 26), when a slight agonal rise occurred. March was a very trying month. The patient failed, was irrational at night and sometimes in mild delirium during the day. Respiration and pulse were sometimes very slow. March 18, it was 4 a minute; it then improved slightly.

Throughout the illness the disks were moderately choked, the degree of swelling subsiding somewhat following the first few spinal punctures (Table 1). The blood count at first showed the leukocytes to be about 10,000 (70 per cent polymorphonuclear leukocytes); later the count dropped to 5,100 with 64 per cent polymorphonuclear leukocytes.

Bacteriologic report.—Blood cultures taken January 5 and 11 were negative. January 6 a sample of spinal fluid was cultured in dextrose brain broth and on blood agar plates. Direct smears of the sediment showed a few gram-negative extracellular diplococci, but did not show acid-fast organisms. After twenty-four hours the brain broth cultures appeared unchanged, although a smear showed a few gram-negative diplococci. At the end of forty-eight hours, the broth was faintly turbid but there was no acidity. The blood agar plates showed about fifty colonies for each cubic centimeter of spinal fluid after twenty-four hours. These were gram-negative cocci, mostly in pairs. The surface colonies were much larger than the deep colonies. When transplanted to nutrient agar slants, visible growths appeared in twenty-four hours, both at 37°C. and at room temperature (22°C.). Neither acid nor gas was produced in fermentation tubes of glucose, levulose, galactose, maltose, mannite, lactose, and saccharose. Since the organism grew much better under aërobic conditions than otherwise the effect on unheated glucose, levulose, and galactose was tested by streaking agar slants of these sugars to which had been added bromthymol blue indicator. The sugar solutions were sterilized by filtration and added aseptically to the sterile agar. Acidity did not develop after two weeks, although there was abundant growth. Nutrient agar slant cultures did not develop pigment after three weeks.

Other samples of spinal fluid were cultured January 9, 13, 26 and February 8, the same organism being recovered in each case, the number of colonies for each cubic centimeter of spinal fluid varying from about 20 to 50. March 9 a culture did not show more than one or two colonies for each cubic centimeter. At necropsy the organisms were not recovered from the spinal fluid. Stains were made for acid-fast bacilli on six different samples of spinal fluid with negative results.

The organism in question was thought to be *Micrococcus catarrhalis*, since this is the only species of the genus which does not ferment any of the sugars. The ease with which it grew on plain agar at room temperature made is unlikely that we were dealing with the meningococcus, as did the fact that freshly isolated cultures remained viable for a week or more without transplantation. The colonies on blood agar were of the smooth, moist type mentioned by Elser and Huntoon as Type II, rather than the crumbly, irregular type so common in sputum, and in this respect were more like the colonies of the meningococcus.

Necropsy.—On exposure of the brain and the spinal cord, a surprisingly slight degree of meningitis was apparent. The entire surface of the brain and the cord was covered by a thin serous exudate and there was no evidence of a marked reaction in the meninges. In view of the long course of the meningitis, this observation was extremely interesting and unusual.

COMMENT

That *Micrococcus catarrhalis* will produce meningitis seems well established. The low virulence and the prolonged course appear to be characteristics of the infection. In a suspected case of meningitis due to *Micrococcus catarrhalis* free drainage should be established. From the clinical course of this patient and the observations at necropsy it would be quite conceivable that recovery might take place in a given case under adequate drainage and supportive treatment.

Case 2.—A case of meningitis due to *Micrococcus catarrhalis* which followed mastoidectomy was noted in the clinic in 1920. In this case the course was rapid and fatal, as a result of lateral sinus thrombosis. Unfortunately, a careful bacteriologic study was not made in this case so it can not be definitely ascribed to *Micrococcus catarrhalis*. For purposes of record, however, it is advisable to include it under this heading.

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TABULATION

*Spinal fluid report**

Date	Kolmer	Globulin	Color	Small lymphocytes	Large lymphocytes	Polymorphonuclear leukocytes	Gram-negative diplococci	Other tests
1/6	—	+	Slightly cloudy	197	16	246	+	Zone 2 curve
1/9	—	+	Slightly cloudy	117	11	293	+	No tuberculosis
1/13	—	+	Slightly cloudy	33	53	85		
1/26	—	+	Slightly yellow	92	52	57	+	Sugar 0.04
2/8	—	+	Slightly yellow	13	12		+	
2/14	—	+	Clear and yellow	92	45	47	+	
2/28	—	+	Yellow	60	12	36		
3/9	—	+	Clear and yellow	72	1		+	

*Only a few of the spinal fluid reports are represented to show their general character.

TWILIGHT SLEEP*

By J. F. Hanna, M.D.

FARGO, NORTH DAKOTA

In presenting a discussion of "Twilight Sleep" one has the feeling of being caught in questionable company because there has been considerable condemnation of this procedure by some writers. No doubt this hostile attitude is due in part to the introduction of "Twilight Sleep" to the laity in this country, the avenue of entrance being through the *Ladies Home Journal* by an energetic correspondent after visiting the Freiberg Clinic.

The profession found itself forced to take a stand on the procedure. This in itself would make the profession very reluctant to take up "Twilight Sleep."

However, like many other procedures, after careful observation and trial, a place can be found for it in our armamentarium to relieve suffering.

A few years ago considerable discussion was evolved by a member of the profession in advocating the routine procedure of version in all cases of delivery.

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*Presented at the Forty-first Annual Meeting of the North Dakota State Medical Association, held at Devils Lake, N. D., May 23 and 24, 1928.

I recall very well the views of a leading obstetrician of the Northwest in citing the awful infant mortality and maternal morbidity that would follow if the texts on version then being published were to be given to the profession.

I am sure if any of the men here present have had the opportunity of visiting Dr. Potter at Buffalo and have seen his work, they must have felt that there was a great deal of good in his technic, and that they brought home with them new ideas that were useful in their obstetric work.

In one of our leading works on obstetrics the author, who is a high light in the specialty of obstetrics, writes guardedly against the use of "Twilight Sleep," but he says in a recent article of his published under the heading of "Prophylactic Forceps Operation":

"A typical case is treated as follows: As soon as the pains are well established and the cervix opened two to three centimeters, the parturient is given 1/6 grain of morphine and 1/200 of scopolamine. After one hour 1/400 of scopolamine is given and in one or two hours occasionally a third dose of the same size. The room is darkened and suggestion used as much as possible to aid the medicines. This is really a modified 'Twilight Sleep,' etc."

Many of our ideas in medicine in general circulation and in text-books are just copies of ideas handed down by someone looked upon as an authority, this same authority taking the word of someone else who has half-heartedly worked upon some procedure because it might have arisen from some other school, laboratory, or clinic.

However, anyone who is interested in obstetrics and has recently done postgraduate work in this line cannot help but notice the efforts being made in various ways to relieve childbirth of some of its pain. At the New York Lying-In Hospital with the synergistic method of Gwathney, that is, ether-oil per rectum; Presbyterian Hospital of Rush Medical with ethelyn and nitrous oxide; Long Island College Hospital where Polak works with "Twilight," also Barnes Hospital of Washington University with "Twilight," Chicago Lying-In Hospital with a modified "Twilight," and many others.

I personally started to use a modified "Twilight" or seminarcosis in 1922 and have gradually increased my usage to date. Several times have I altered my technic in the number of injections and the amount of morphine and hyoscene used. At present our results are very satisfactory with a much smaller dosage than we used at the onset of our work.

The procedure, to my mind, is purely a hospital one. It is not a practical procedure to be used in the home. No matter what anesthetic used in the home, if deepened enough and continued to the point of blotting out the pain to the patient, it will excite the neighbors and relatives, so that it is much better to deal with the complaints of one (the patient) than it is to deal with the complaints of several (the relatives and neighbors).

Chloroform, I think, is still the anesthetic of choice in home deliveries. "Twilight Sleep" requires watching and more time than the average practitioner can give to it. You also leave yourself open to criticism, for, if anything happens to the baby, whether it be due to a contracted pelvis, prolapsed cord, etc., if you were to give castor oil prior to the onset of the labor, by many you would be criticised.

There is, however, much recompense that makes it worth your while to have a thankful mother inform you that she remembered nothing of her delivery, and certainly would not hesitate to go through labor again, in contrast to telling you what a horrible nightmare it all was.

Gauss, of the Freiberg Clinic, in 1906 reported 500 cases. In studying these he had encountered and carefully recorded most of the difficulties and most of the objectionable features about which many who took up this method of relieving the pain of child-bearing complained, and he had overcome and avoided these difficulties and by-effects in his later series of cases. This is particularly true of the administration of morphine, which Gauss held responsible for the delayed respiration in some "Twilight" babies, and which he restricts to 1/6 grain (0.0108 gr.) to be given once, and once only, with the initial dose of scopolamine.

In 1915 the investigation and employment of Gauss' method was taken up by Dr. Henry Schwartz, then chief of the Obstetric Department of the Washington University Medical School. Animal experimentation was carried on in the pharmacologic laboratories by Dr. Otto H. Schwarz under the supervision of Dr. Dennis E. Jackson, then Professor of Pharmacology, to determine the effects of the various opium alkaloids and scopolamine on heart and respiration before employing the drugs in a routine clinical way.

The experiments proved to the satisfaction of the investigators that scopolamine in doses much larger than were ever recommended for "Twilight Sleep" has no material effect on blood pressure or respiration. The paralyzing action of scopolamine on the peripheral nerve endings was illustrated by its action on the endings of the vagi in bronchioles, its action on their inhibitory terminals in the heart, and its action on the terminals of the third nerve in the iris. Experiments on dogs with morphine, narcotin, and morphine-narcotin meconate showed that their alkaloids act directly on the muscle fibers of the bronchioles, causing bronchoconstriction. This action was most pronounced in morphine, less so in narcotin, and least in morphin-narcotin meconate. The interference of these opium alkaloids with the respirations of the new-born child is, therefore, twofold. In the first place, the respiratory center is depressed so that it requires a greater degree of stimulation to be set in motion; in the second place, there is bronchoconstriction.

Opitz, in 1922, published the most recent report from the Feiberg Clinic. He stated that among 4,279 births, 2,242 of which were effected under "Twilight Sleep," only 2.1 per cent of the children born in "Twilight Sleep" died during the first nine days, while the mortality among children delivered without the use of "Twilight Sleep" reached 3.75 per cent. He said that the danger in "Twilight Sleep" depended on the amount of morphine used. He felt that if "Twilight Sleep" causes any injuries to mother or infant, these are due exclusively to the method employed and to improper drugs. Good results can be obtained only by operators who have a perfect command of the technic, which requires careful study.

I have tried the various preparations, and at one time used pantapon, the combined alkaloids of opium, believing that it is less depressing to the respiratory center than morphine, but I noticed no particular advantage and then discontinued its use. Scopolamine hydrobromide in ampoule form as prepared by Burroughs Wellcome Company was given a trial. At present, and for the past two years, I have used the tablets of morphine and hyoscine put up by Sharp and Dohme.

The morphine-hyoscine seminarcosis is used as a first stage measure. When the uterine contractions are strong and occur at regular intervals, and usually when there is a two-finger dilatation in the primiparous patient, seminarcosis is begun. In the multiparous the procedure is usually begun with the first regular contractions that are painful.

The patient is removed to the first-stage room where it is possible to have quiet and under your complete control away from relatives. The ears are stuffed with cotton moistened with olive oil, and after the second injection the eyes are covered with gauze held in place with adhesive strips. The initial dose is morphine, 1/8 gr., and hyoscine, 1/100 gr., for the average woman. These injections are given subcutaneously. This point is important as it is not desirable to have the hyoscine act too quickly. On the contrary, one wishes to take possession of the patient very slowly. With this injection nitrous oxide and oxygen inhalations with the pains are frequently used. The first injection usually causes dryness of the mouth, and the face becomes flushed.

The second injection is given usually forty-five minutes after the first one. This injection usually consists of hyoscine, 1/100 gr., although 1/200 gr. will be enough to hold. The morphine is never repeated after the first injection.

Some workers test the degree to which the patients are under the influence of the drug by a very simple yet accurate method. Before the second and before each contemplated subsequent injection, the patient is requested to put the index-finger to the tip of the nose, the eyes being covered. If she still retains locomotor co-ordination, the contemplated injection is given; however, if she moves her finger around vaguely and misses the mark, she has lost locomotor co-ordination, and the injection is omitted, or the dose is reduced, for the patient has the desired amount of the drug. In most cases this stage is reached shortly after the second injection, but in not a small number after the third injection.

The third injection is usually given about one and one-half hours to two hours after the second one, and in most cases consists of 1/200 gr. of hyoscine.

After the third injection, most patients remain sufficiently hyoscinized for two hours or longer. At the expiration of this period, full cervical dilation has taken place in most cases, and further injections are unnecessary and are to be avoided. The first stage of labor is over, or nearly so, and the patient can be easily carried along with nitrous oxide timing the contractions by the hardening of the uterus.

At the end of the second stage when the head begins to crown, chloroform is used, and with pressure on the fundus, the head can be expressed by the Ritgens maneuver.

There are, however, numerous cases in which the first stage is protracted for many hours. This condition is especially true in some primiparous women in whom the membranes have ruptured before the onset of labor, or where the head is in the posterior position, and in some multiparous women in whom through repair of cervical laceration, together with fixation of the uterus forward by some abdominal operation has been performed. Some of these women suffer intensely and for many hours during the first stage of labor until dilation is complete and final delivery is possible. It is in these cases that "Twilight Sleep" has proved valuable. It is in these cases, likewise, that the administration of the drugs must be watched most carefully. The amount of hyoscine given and the time of injections depend entirely on the degree to which the patient appears to be under the influence of the drug. The administration of the drug should be continued until locomotor co-ordination is lost. When this stage is reached it should be continued by infrequent small doses.

The loss of locomotor co-ordination marks the one boundary of seminarcosis. The patient must cross this boundary, which is just enough, and she must be kept from crossing the other boundary which is "too much." The other boundary is reached when the patient's pupils no longer show dilatation at the height of contraction, because they are already dilated to the maximum by the action of the hyoscine on the terminals of the third nerve in the iris. Testing the patient from time to time and keeping her on this narrow strip constitutes scientific seminarcosis. When the seminarcosis is intensified to general anesthesia by a general anesthetic, care must be taken that not too much is given. Several c.c. of chloroform given by drop method on a thin piece of gauze mask are usually sufficient to render the patient completely relaxed.

There is an inclination towards giving the patient too much chloroform, and by so doing the fetus is also chloroformed so deeply that it is bound to become asphyxiated and to require resuscitation.

My work has been carried on in three institutions. In one only, that is, St. John's Hospital, has seminarcosis been given. A graduate nurse has assisted me for the past four years in observing my cases. She is well trained in making rectal examinations, and supervising the anesthetic.

In compiling my usage from 1922 to 1928, it is as follows:

1922—Total cases, 170.
  Hospitalized at St. John's, 109.
  Morphine-hyoscine seminarcosis, 66.
  Stillborn, 1. Post-mortem showed abnormality of bowels.
  Abortions, 4 (less than six months).
  Post-partum deaths, 2—(1) Hemophilia. (2) Post-mortem findings, enlarged thymus.
  Premature babies (less than 2,500 gms.) 3.
  Forceps, 15 per cent.
  Maternal mortality, 0.
  Infant mortality, 2.7 per cent.
1923—Total cases, 205.
  Hospitalized at St. John's, 117.
  Morphine hyoscine seminarcosis, 80.
  Forceps, 20 per cent.
  Stillborn, 1. Placenta previa, centralis.
  Abortions, 3 (less than 6 months).
  Post-partum deaths, 2—(1) Hemophilia, (2) Breech, (less than 2,500 gms.).
  Prematures, 2 (1) Mother acute appendicitis. (2) Monster.
  Maternal mortality, 0.
  Infant mortality, 2.5 per cent.
1924—Total cases, 240.
  Hospitalized at St. John's, 136.
  Morphine hyoscine (seminarcosis) 116.
  Forceps, 15 per cent.
  Breech, 5.
  Placenta previa, 2.
  Abortions, 2—(1) 6 mo. 990 gms. (2) 3 mo. 500 gms.
  Stillborn, 1. Placenta previa.
  Post-partum deaths, 2—(1) Breech, labor induced, mother pre-eclamptic. (2) Oversize baby, 13 lbs., difficult delivery.
  Maternal deaths, none.
  Infant mortality, 2.2 per cent.
1925—Total cases, 264.
  Hospitalized at St. John's, 175.
  Morphine hyoscine (seminarcosis) 150.
  Forceps, 10 per cent.
  Breech, 7.
  Placenta previa, 1.
  Cesarian section, 1 (previous section).
  Prolapse cord, 1.
  Eclamptic, 7.
  Stillborn, 4—(1) 3 mothers eclamptic. (2) 1 macerated fetus, no fetal movements ten days prior to delivery.
  Deaths post-partum, 2—(1) Mother, hypertension and nephritis. (2) Spina bifida.
  Abortions, 2 (less than 6 months).
  Maternal deaths, 1.
  Infant mortality, 3.4 per cent.

1926—Total cases, 326.
Hospitalized at St. John's, 227.
Morphine hyoscine (seminarcosis) 201.
Forceps, 20 per cent.
Breech, 8.
Prolapsed cord, 1.
Eclamptic, 1.
Premature, 7 (weight from 650 gms. to 2,220 gms.)
Stillborn, 2—(1) Breech with prolapsed cord. (2) Difficult delivery due to size of baby.
Deaths post partum, 3—(1) 2 Congenital obstructions of esophagus. (2) 1 Congenital heart.
Twins, 7.
Maternal deaths, 0.
Infant mortality, 2.1 per cent.

1927—Total cases, 353.
Hospitalized at St. John's, 261.
Morphine hyoscine (seminarcosis) 248.
Forceps, 13.5 per cent.
Breech, 3.
Version, 6.
Placenta previa, 1.
Abruptio placentæ, 1.
Cesarian section, 1.
Prolapsed cord, 1.
Eclampsia, 1.
Stillborn, 3—(1) Eclampsia. (2) Tetanic uterus. (3) Abruptio placentæ.
Prematures, 6.
Deaths post-partum, 4—(1) 2 cerebral hemorrhage. 48 hours and 72 hours after delivery. (2) Difficult delivery. (3) Prolapsed cord.
Twins, 6.
Maternal deaths, 0.
Infant mortality, 2.5 per cent.

To summarize from 1922 to 1928:
Total cases, 1,558.
Hospitalized at St. John's, 1,025.
Morphine hyoscine (seminarcosis) 861.
Forceps, 15.6 per cent.
Fetal mortality, 2.6 per cent.
Maternal deaths, 1.

My use of forceps has been really a prophylactic one, in 85 per cent of the cases being applied when there is considerable crowning after "ironing out the perineum" as advocated by Potter, and the use of an episiotomy as indicated.

The forceps are removed before the head is born, the infant being expressed by intermittent pressure on the uterine fundus. This perineal forceps application is in no sense of the word a forceps operation, requires practically no traction, and permits the patient to be delivered under complete anesthesia and under surgical conditions in which there is no struggling of the patient and contamination of the sterile field.

Hyoscine seminarcosis is especially useful in:

1. Primiparous patients during the first stage or in multiparous patients who have had previous repair work on the cervix or uterus rendering labor unduly protracted and painful.

2. Cases of eclampsia when the patient is having convulsions, when the patient is in active labor, and when forced delivery is not indicated. In these cases it seems to aid in combating successfully the convulsions and renders the patient less sensitive to external stimuli, which frequently excites convulsions.

3. In cases of pulmonary tuberculosis and in cardiac disease. The contra-indications to the use of hyoscine morphine are more imaginary than real.

(1) Idiotic mothers and babies the result of its use. However, I feel that it should be used with hesitancy in premature deliveries because of the incompletely developed respiratory apparatus and lessened irritation of its regulating center.

In case of primary uterine inertia, frequently met in the endocrine type of adiposity, because the drug frequently stops the pain entirely.

In cases of eclampsia, cardiac disease, placenta previa, abruptio placentæ, where the patient is a poor risk and the prognosis for the fetus is poor, and whatever the outcome may be the cause of it is sure to be laid to seminarcosis.

DISCUSSION

Dr. John H. Moore (Grand Forks): I am very glad to be in the "questionable" company Dr. Hanna mentioned in the early part of his paper. I have used this method, call it "twilight sleep" or "twilight delirium" or what you please, in about 700 cases, starting when Dr. Hanna did, in 1922. I believe it has a very important place in modern obstetrics. I am still using pantopon in place of morphine as, in my experience, it produces less nausea and vomiting. Scopolamine (stable) (Hoffman-LaRoche) in ampoules is used exclusively in my work. The danger of twilight sleep lies in the morphine, and I am more and more limiting the amount of morphine or pantopon. Smaller and more frequent doses of scopolamine give better results than infrequent large doses. Analgesia and amnesia, once established, are usually continued smoothly by doses of 1/200 to 1/400 grains.

There is not much that Dr. Hanna has not covered in his paper, but I think the more one tries to relieve the pain of childbirth the better it is for the patient. No one should attempt to use this method of pain relief unless he is willing to devote time to the careful study of his patients in labor.

If he does this he will not only relieve the pain of childbirth but he will be able to safeguard his patients further by the early recognition of obstetrical complications which, without careful observation of the patients, might escape unnoticed.

When it becomes necessary to use a general anesthetic to reënforce the twilight sleep one has the choice of several agents. For the average case nitrous oxide-oxygen is ideal. The objection to it is that it frequently does not produce enough relaxation for an operative delivery. Ethylene-oxygen is preferable in such cases.

We are all working for the same end, the relief of suffering humanity, and it seems to me that twilight sleep has a large place in relieving the pain of that most patient sufferer, the parturient woman.

Dr. E. M. Ransom (Minot): I am very much interested in Dr. Hanna's paper and certainly enjoyed the very thorough description of his method. We have noticed an increasing number of articles by men in this country and Europe on the relief of pain in labor. Several different methods are being used. Last December I saw an article by Patchard of New York, in which he carefully reviewed the work of Gwathney in his use of etherized oil. Many have used the method Dr. Hanna has described, and more recently there have been efforts to relieve the pain of confinement by spinal anesthesia. This work is more in its infancy, and thus far the results are not altogether favorable. My own experience with scopolamine and morphine in carrying the patient entirely through labor has been limited, but it has been very appealing to me and gratifying to the patient. For about four years I have used the Gwathney method of administering etherized oil by rectum. I have modified the method somewhat and have practically discontinued the use of magnesium sulphate, for I have not been able to convince myself of the synergising effect of it. I have been using with the etherized oil, scopolamine and morphine, particularly in the first stage, but in the second stage of labor I have been using the etherized oil only. I believe this carries the patient along more safely in the second stage, and in my experience we have had less excitement during this stage with this method. However, I think it is not wise to allow the patient to complete the second stage of labor, especially as the head emerges through the vaginal outlet over the perineum, without some method of general anesthesia. No matter what method of twilight sleep is used, it does not always carry the patient through this stage without some difficulty. I doubt if any method will ever be developed which will be safe for the general practitioner to use, for he will not give the time and study and attention to the method that its use demands, but for those who are willing to give this necessary time and attention, twilight sleep certainly has its place, and an increasing place, in obstetrics as is shown by the increasing number of men who are using it. I think very few obstetricians are willing to see women pass through the pain of confinement without making some effort to ease their suffering. If we can believe the reports of those who are doing this work, there is a wonderfully low infant mortality and a maternal mortality which is practically nil.

Dr. Hanna (closing): I have nothing further to say, except to thank the gentlemen for their discussion and the members of the Association for their attention.

"SPEAKING ABOUT DRUGS . . ."

By Raymond Wesley Lagersen, M.D.
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Five thousand years ago an oriental potentate returned from a foray into a far country, and in the course of the festivities attendant upon his arrival, rich viands were set before him. The royal wayfarer indicated his pleasure, and consumed nearly all of that which had been prepared.

The serving woman, solicitous of his comfort, and noting this her lord's evidence of appetite, hurried from the room that she might procure more food. When she returned the potentate was prone upon the floor, one hand pressed to his midriff, the while with the other he mopped beads of perspiration from his brow. Upon his face was an expression that from time immemorial has been associated with pain.

The potentate, it would appear, was ill; disease, or, mayhap, an evil spirit, had taken up its abode within the royal person. The alarmed serving woman speedily went forth and summoned a physician, or by whatever laryngeal gesture a healer of the sick was then designated.

The man of medicine arrived, and after a moment of conversation with the sufferer, ordered that a fire be kindled upon the hearth. When the flames had fired the wood, leaving but the glowing embers, he cast thereon a pinch of powder from a bag carried at his waist.

Instantly the embers flamed blue, and, cross-legged at the fireside, the healer gazed intently in the weird flickering depth of flame, muttering incantation as the smoke wreathed upward. Anxious relatives, favorite wives, and retainers of the potentate watched with fascination the priest of a mysterious cult at his orisons. The sick man groaned anon; but not until the last tongue of flame had spewed itself out, did the healer cease his chant.

Then, rising, he produced two flat rocks, one slightly larger than the other. From the bag at his waist, he brought forth dried scorpions' tails, and using the two stones as mortar and pestle, he reduced them to a fine, impalpable powder.

This, with further incantation, he gave the stricken prince, and then, much after the fashion of us moderns, doubtless, sat himself at the side of the pallet to watch the effect of the dose.

In the course of time, a half hour, an hour perhaps, grateful eyes gave thanks to this miracle-worker, who by means of cryptic utterance and nauseous potion was able to restore the sufferer to a state that already resembled normal health.

That was five thousand years ago, more or less; in this year, Anno Domini, 1928, voices will arise saying that this necromancer of the Asian plain worked no wonder at all; that the potentate was suffering, in all probability, from a green-apple cramp, and that he would have recovered had no one at all been called to his assistance. For of what value incantation, and what, if any, virtue resided within the dried tails of scorpions however finely they might be powdered?

Quite right. He was no miracle worker; and, in all probability, the potentate *was* suffering from a green-apple cramp. The fact that he recovered under such ministration would tend to prove that nothing more serious ailed him; and, since he did indeed recover under the treatment outlined, obviously he would have recovered just as advantageously, quickly, and completely had he been left to nature's unaided devices.

Nevertheless, this supposed thaumaturgist working in the cradle of an early Asian civilization conferred upon the human race an incalculable benefit, for, note this: in addition to incantation, *he gave his patient something as a medicament!* The former of no value therapeutically, and the latter, crude therapy and equally of no value; but, and however, as the phrase has it, a medicament. And that differed from the method of his predecessors, who relied upon incantation alone, or, if the evil spirits were thought to be too strong for defiance or counterirritation, upon propitiation, propitiation by means of offerings, some of them human and the product of the sacrificial knife.

This physician apparently doubts the complete efficiency of incantation; and trusts in part to the efficacy of a curative potion. Thus he represents a distinct advance over his ancestors in method of healing. More important, he is the expression of a distinct advance in philosophic thought. Verily, this man and his fellows were revolutionists.

The dried scorpions' tails, of no value therapeutically, nevertheless represent an idea, a transition phase of Asiatic culture and ancillary to a new philosophy. Therefore scorpions' tails, and therefore countless hundreds of other preparations, organic and inorganic, were used in the treatment of the ills of the flesh; used, evaluated by crude standards, and then discarded or retained.

Thus among the Chinese, and for five thousand years, an infusion of ephedra vulgaris, under the native name of "Ma Huang," have been used as a valuable sedative in cough, an antipyretic, a diaphoretic, and as a circulatory stimulant. Recently the Japanese chemists, Yamanashi and Nagai, isolated the active principle and named it *Ephedrine;* subsequently Ladenburg and Oelschlagel determined its chemical formula, with a structure closely resembling that of epinephrine, which, as is well known, it resembles in physiologic activity. And suffice it here to say that Ma Huang and the various salts of Ephedrine do as much as the Chinese claimed, and more that they did not suspect.

And thus, empirically, numerous other drugs that have stood the test of time, and recently, or comparatively recently, experimental proof under controlled conditions. Thus the bark of the Cinchona tree, from which later the active principle, quinine, was isolated. The drug is of interest, for as the bark infusion it had long been used as a specific in the treatment of malaria by the American natives, and was brought to Europe by early explorers. Its first use is shrouded in the impenetrable mists of history, but its value was in all probability recognized first by the Aztec, Peruvian or Mayan Indians; certainly the evidence obtainable shows priority by these groups.

Just how its value was discovered is, of course, unknown; perhaps somewhat after the manner of Ma Huang or the scorpions' tails of the Chinese healers, or perhaps in the dark of an inky tropic night, an Indian lay shaking with chills and fever and in the madness of delirium chewed the bark of a nearby Cinchona tree;

it is pure romance. We do not know; but we do know that its use was widespread among these remnants of early great civilizations. It still is, and among tribes removed from contact with modern culture.

A friend, exploring in the Venezuelan jungle along the banks of the Orinoco, was at one time left alone in camp by the other whites in the party. The day after their departure, he developed the chills and fever characteristic of malaria, which he, himself, being a physician, immediately recognized.

That afternoon several of the native Indians of the party left camp and were gone for a period of three days. When they returned they bore with them bunches of the bark of the Cinchona tree, of which they immediately made an infusion. The bark was placed in a calabash gourd, a small amount of water added and hot stones placed therein to supply the heat. When the infusion was of the required strength, as attested by its bitterness, it was offered the patient.

These primitive people, or degenerate remnant of a once mighty civilization (as seems more probable) were able to make a diagnosis, and further, to supply the treatment. It is not strange. The use of the Cinchona bark had been a part of their medical lore for centuries. And it is still less strange when one considers the fact that the ancient Mayan group possessed a calendar accurate to one second in a hundred thousand years. Such a culture, it is to be presumed, would not have neglected the art of healing and would have a comparatively efficacious pharmacopeia.

And thus with many of the drugs now in common use in the treatment of disease. Thus with mercury in the treatment of syphilis, at a later date. Thus with digitalis. Thus with belladonna. But it was the method of the empiricist—a matter of trial and error—and therefore as in the case of the supposed efficacy of the dried tails of scorpions, resulted in a massive unwieldy pharmacopeia, the great majority of whose members were inert and possessed no pharmacologic activity at all.

The Aztec, Peruvian or Mayan, in the presence of chills and fever, exhibited the bark of the Cinchona tree. If, indeed, the sufferer had malaria, he recovered from his disease. If he was suffering from some other ill, equally productive of chills and fever, the treatment was of no value, except, perhaps, to reduce the fever somewhat. So much for the empiricists of the time—of all time, as a matter of fact, whether working in the valleys of the Euphrates or the Nile; the Asian plateaus or the jungles and mountains of the Americas; Phenician, Roman, and Greek.

Essentially, drug therapy remained empirical until after the European renaissance. We may call it a renaissance; in a sense it was. But rather it was the flowering of the plant the seeds of which had been sown thousands of years since by the potentate's physician and contemporary philosophers. The rational use of drugs in healing follows closely the intellectual renaissance and the discoveries of the various workers in the allied sciences.

Immediately preceding the era, the alchemists did nothing more than mix with a certain crude experimental chemistry metaphysical speculation, and searched with more or less diligence for an "Elixir of immortal health," which they were sure would confer the boon of "perfect health and length of days" and which would render that "great disease, poverty," an innocuity existing only in legendary human memory.

Then came Paracelsus (1493-1541), who, as Sir William Osler puts it, "had within him the very spirit of revolt"; the man who struck from chemistry the shackles of alchemy, and insisted that therapeutics be based on a knowledge of chemistry, physiology, pathology, and pharmacology. "Alchemy," he declared, "is neither to make gold or silver: its use is to make the supreme sciences and to direct them against disease."

Thus among the physician-chemists, or iatrochemists, as they were called, Paracelsus was easily the master of them all. He forced alchemy into a new pathway, that of a rational chemistry based on experimentation, and brought about fusion of the two sciences, chemistry and medicine. Stimulated by the work of Paracelus, the iatrochemists of the sixteenth and seventeenth centuries took long strides forward in the development of the allied sciences, anatomy, pathology, physiology, chemistry and physics, without which a rational therapeusis was impossible. It was an era of discovery.

Here we find Tachenius, Hooke, Brunner; Willis, Mayow, Lemery, Van Helmont; Meyer and Sylvius—these but a few whose achievements come down to us. At first glance it would seem remarkable that these men appeared in a group; but it is not strange. They were products of an age. A new spirit was abroad in the land; an awakening. It was the age of a

Leonardo, a Michelangelo, a Titian; Copernicus, Galileo, Harvey; Bruno, Bacon, Descartes; Velasquez and Cervantes; Rembrandt, Rubens; Shakspeare. It was an age of intellectual awakening, and it is not strange that the matters of life, disease, and death should occupy a niche in the thought of man. Something came of it; a new impetus, based on the fundamentals, scientific research and accurate experimentation.

The years of the eighteenth and nineteenth centuries become a part of the past and leave with us discovery and achievement. Here we find the chemists isolating urea, uric acid, allantoin; creatine, glycerine, and benzene in 1825—these, whose discovery and isolation were to exert so great an influence upon synthetic chemistry, without which the wizardry of the twentieth century would be impossible. And here at last we find the development of medicine interdigitating so closely with that of chemistry and physics that it is difficult to state where one leaves off and the other begins. Medicine, it is discovered, is the biologic applications of chemistry and physics—perhaps, in the last analysis, all physics.

And the physicists of the age—the period gave us a Galvani; a Coulomb; a Volta; Oerstad, Ohm, Faraday, Ampere; these concerning themselves with the phenomena of electricity; Mariotte and Gay-Lussac with the behavior of gases; Fourier and Carnot in the field of heat; Young and Fresnel elaborating the theoretical principles involved in the production, manner of propagation, and speed of light.

And this is the age that sees morphia isolated from the juice of the poppy plant; of strychnia from the seeds of the strychnos tree; quinine from the bark of the Cinchona tree; veratrine from hellebore and cevadilla seeds; atropine from belladonna. . . .

Thus arose the art of healing; thus began the science. First the empiricist; then the scientist. Quinine in malaria, digitalis in heart disease, mercury in syphilis—they came a long way, empirically, by trial and error.

Let us for a moment contrast with this the method of the twentieth century, in this the matter of drug therapy.

Salvarsan is a good example. Ehrlich, working in the laboratory, was struck by the fact that certain parts of the biological cell, that is, the nucleus, stained well with hematoxyln; the cytoplasm, or extranuclear portion, better with eosin, the phenomenon representing a certain selective affinity by the cells, or, more properly, parts or divisions of cells, for different chemical compounds. Ehrlich reasoned that a chemical compound could be found that would be poisonous to an organism, but not to the cells upon which that organism was parasitic. With that as a beginning there commenced a long series of experiments, ending finally in a product—salvarsan. And then later, neo-arsphenamine; the whole work a monument to the brilliant *a priori* reasoning of the twentieth century iatrochemist.

Again, Benz, in 1877, had discovered that the thyroid of animals fed to myxedematous individuals increased metabolic activity and resulted in a cessation of symptoms.

Then came Kendall, who isolated the active principle of the thyroid gland. He called it thyroxine.

Harrington and Barger, working in London, by a series of brilliant experiments established the chemical structure and succeeded in preparing it synthetically and thus wrote the last chapter in the evolution of a drug.

Contrast these methods with that of the miracle-worker of an ancient Asian culture. And yet he *was* a miracle-worker, for without him the thaumaturgy of the twentieth century would be impossible. Verily, we stand upon the shoulders of the workers of past generations; the present a synthesis of the efforts of the past.

UTERUS DIDELPHYS*

With Report of a Case Demonstrated by Lipiodol Injection

By Lee Monroe Miles, S.B., M.D., F.A.C.S.
SAINT PAUL, MINNESOTA

Failure of fusion of the lower two-thirds of the Müllerian ducts which results in complete reduplication of the uterus, cervix, and vagina, is not extremely rare, yet is sufficiently uncommon to warrant the presentation of a case and a discussion of the condition. Normally, fusion of the two ducts begins to take place in the sixth to the eighth week of intra-uterine life and is complete by the twelfth week. Evidence of fusion first appears in the lower portion of the ducts, and the lower one-third forms the vagina, the middle third forms the cervix and the body of the uterus, and the upper third remains unfused to form the two uterine tubes. No satisfactory explanation has as yet been offered for the failure of fusion in a given case. It is, indeed, remarkable that fusion takes place so often as to be called "normal," and that failure of fusion takes place so rarely as to be called "abnormal."

Because of the fact that fusion begins in the lower end of the ducts and this fusion process may be arrested at any point of the primitive genital tract, duplication of part or the whole of the uterus is much more common than duplication of the entire tract. These anomalies of structure of the genital tract are classified according to the degree of separation that exists. Thus we find: a. uterus septus, a condition in which there has been complete fusion to the normal degree of the two ducts, but the partition between the two halves of the uterus has not been absorbed; b. uterus arcuatus, a condition of duplication involving the fundus region of the uterus only; c. uterus bicornis, a condition in which fusion has taken place to form normal vagina and cervix but was arrested above that level leaving a double uterine body; d. uterus bicornis bicollis, a condition in which the lower third only has completely fused so that there exists a single vagina with two uterine bodies and two cervices; e. uterus didelphys, a condition of complete failure of fusion in which there is reduplication of the vagina, cervix, and uterus.

Atresia may occur at some point in the tract in these cases, and in case there is obstruction there will be retention of menstrual products causing distention of the portion of the tract above the obstruction. Maldevelopment also may occur, and the parts may remain in an infantile condition or preadolescent condition.

It would be natural to suppose that anatomical abnormality would lead to abnormality of function and that these double anomalies of the genital tract would be accompanied by disorders of menstruation or reproduction. Except in those few cases complicated by atresia functional disturbance is very rare. Thus Findley[1] reported 135 cases of uterus didelphys in whom there occurred 216 full-term pregnancies, 15 premature children, and 86 abortions. Dannreuther[2] reported 11 cases of partial or complete duplication of the genital organs, 5 of whom never conceived but the other 6 produced 16 living children and 11 miscarriages, 8 of which were admittedly self-induced. Levinson,[3] Wiener,[4] Moench,[5] Newton,[6] and Barkley[7] all report cases they have encountered, each of which had from two to five normal pregnancies and normal labors. Scanning the literature, one is immediately struck by the fact that practically all of these cases are discovered in connection with either pregnancy or labor. This signifies two things: in the first place these double organs perform the menstrual function so normally that the attention of the patient is not called to anything unusual, and a physician is not consulted; in the second place the double organs perform the function of reproduction normally in a vast majority of cases, and the anomaly is discovered incidentally by the physician in antenatal examination or as some pathology of pregnancy or labor calls his attention to it.

The evidence of reported cases would indicate that, instead of a tendency to sterility, there is a strong tendency to hyperfertility. In Findley's series of 135 cases there were 13 pairs of twins in the 216 full-term children. Kickham[8] reports a case of twins, one fetus in each uterus. Moench cites a case of superfetation, a seven-months fetus delivered from one uterus, and three days later a fresh three-months fetus was delivered from the other uterus. Succeeding pregnancies have frequently been noted to occur in the two uteri alternately.

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*Presented before the Saint Paul Obstetrical and Gynecological Society.

Pregnancy usually runs an uneventful course the same as in normal uteri. Complications of pregnancy, such as toxemia, do not seem to occur with any greater frequency than in patients with normal organs. Horn[9] reported a case in which the pregnant horn of the uterus became twisted and necessitated a hemihysterectomy in the seventh month. Ectopic pregnancy also appears to be very rare.

Labor proceeds normally in most cases. Completely double organs seem to cause less trouble in labor than the septate or bicornate uterus. Of the 216 deliveries collected by Findley in cases of uterus didelphys there were 23 Cesarean sections and 2 Porro operations. The indications for the Cesarean section were as follows: 5 for interference with descent by the non-pregnant uterus, 2 for eclampsia, 1 for toxemia, 3 for breech presentation, 1 for atresia of the vagina, 1 for uterine inertia, 1 for flat pelvis, 1 for threatened rupture of uterus, 8 for cause not stated. Forceps or version and extraction were necessary in 22 other cases. Other cases reported in the literature show a majority of normal deliveries with operative interference most often necessary because of the nonpregnant uterus blocking the pelvis.

The case presented here is of interest from the fact that an operation had been performed six years before for a ruptured pregnancy in the right tube and also from the fact that the anomaly was demonstrated by *X*-ray after lipiodol injection into the two uteri.

Case history: Mrs. L. L., married, aged 20, was first seen on March 13, 1928. At that time she thought she might be pregnant, as she had been having morning nausea for a week and had noticed some changes in her breasts. Her menstrual periods had always been regular of the 28-day type with a scanty flow lasting two or three days without pain. Her last menstrual period had been on March 1, 1928. Her previous period had been on February 1.

Past history: She had been married at the age of fourteen and immediately became pregnant. Previous to the pregnancy she had menstruated normally on September 1, 1922. On November 11 she fell down stairs and had considerable abdominal pain and some bleeding from the vagina, which continued though never in an alarming amount until December 9, 1922, on which day she was operated on by Drs. Tait and Nash, of Galesburg, Ill. Their diagnosis was ruptured ectopic pregnancy in the right tube. At that time she had a mass reaching to the umbilicus, which lay normally on the right side but could be moved freely to the left of the midline. At operation the right tube and appendix were removed. The pregnancy was in the right tube, and the mass weighed two pounds. There was also noted a small firm mass to the left of the uterus, and the left tube showed signs of recent salpingitis and was not disturbed. Recovery was uneventful.

She was separated from this first husband and was remarried in September, 1927. She has always enjoyed the best of health and has been active and vigorous. Physical examination on March 13, 1928, revealed nothing of importance except the condition of the pelvic organs. The introitus was normal in appearance. On doing a bimanual examination the examining fingers immediately encountered a septum in the vagina, and at the apex of the vaginal canals were felt two small but normal cervices. On right side there was a short, firm mass smaller than a normal uterus, and indeed it felt like the cervical stump after a rather high supravaginal amputation of the uterus. The right adnexal region was clear. On the left the cervix seemed to be continuous with a rather soft mass about the size of a normal uterus which was markedly deflected to the left and not at all freely moveable. The consistency of this mass was suggestive of a pregnant uterus of a more advanced pregnancy than her history indicated. By rectal examination a distinct groove could be made out between the right uterus and this left uterine (?) mass. Speculum examination showed two vaginæ with a thick septum extending from the hymen to the depression between the two cervices. My impression was that there might be a pregnancy in the left uterus. Nothing further was done at this time except to instruct the patient to return in about one month for more study.

She returned April 10 saying that she had had a normal period on March 28, and the vaginal findings being the same with no apparent increase in size of the left mass she was admitted to the Midway Hospital for *X*-ray study. Cannulæ were inserted into both uterine cavities, and lipiodol, 2.5 c.c. was injected into the right uterus, and *X*-ray films were taken. (See Fig. 1.) The left uterus was then injected with 6 c.c. and films were again exposed. (See Fig. 2.) One hour later another film was exposed. (See Fig. 3.)

In view of the fact that her preceding pregnancy had been in the right tube and also because both uteri were small and hypoplastic, and further because the left tube, though patent, was very evidently pathological, she was advised to have the left tube sectioned to prevent the possibility of a repetition of a tubal pregnancy.

Operation was performed, April 18, 1928. The omentum was densely adherent throughout the entire pelvis, and these adhesions were separated only sufficiently to expose the left adnexa. The left uterus was short, the supravaginal portion being about 2.5 cm. long and only about 1.5 cm. in diameter. There was only one round ligament and this was inserted normally. The left tube was much dilated in its middle third, about 1.5 cm. in diameter, and the ovary was distended by a cystic structure about 4 cm. in diameter. The ovary and the tube were adherent to the uterus, and it was this cystic ovarian mass which I had palpated at bimanual examination. The ovarian cyst was resected and the ovary sutured with plain gut. The uterine cornu was resected and the incision closed with fine silk. About an

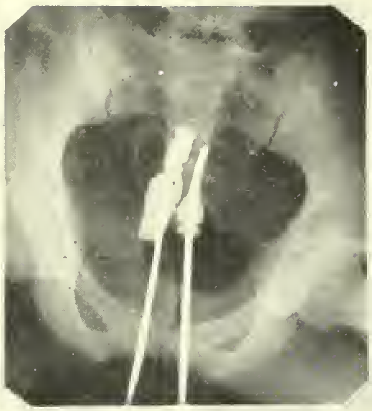

Fig. 1

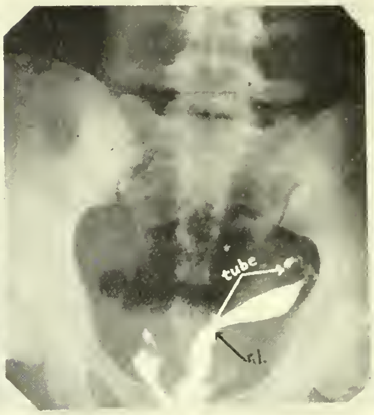

Fig. 2

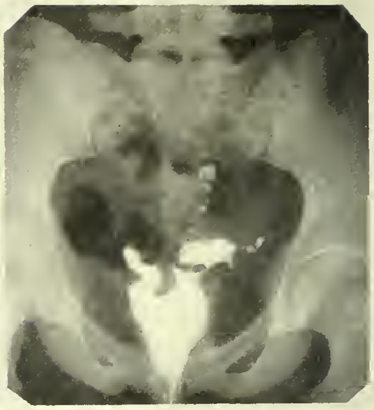

Fig. 3

Fig. 1.—Both cannulæ in place and injected mass of lipiodol in right uterine cavity. No communication between the two uteri and no tube present.

Fig. 2.—Injection of lipiodol into left uterine cavity. Uterine cavity short, tube dilated in mid-portion and very thin and tortuous at distal end. Droplets of lipiodol appearing in peritoneal cavity. Round ligament found at operation inserted at r. l.

Fig. 3.—One hour after injection. Note numerous droplets of iodized oil in peritoneal cavity and residual oil in tube. Notice especially the two concavities in the large mass of oil in the vaginæ indicating the two cervices.

inch of the tube was resected, and the distal end was buried under the peritoneum of the broad ligament. The abdomen was closed, and the patient made an uneventful recovery. Since the operation she has had one normal period.

Only two other cases of double anomalies of the uterus demonstrated by lipiodol injection have been reported in the literature. Levinson, in a patient who had had a right salpingectomy fourteen years before, did a left salpingo-oöphorectomy and left hemihysterectomy and then three weeks later demonstrated the right uterine cavity by this method. Steinharter and Brown[10] demonstrated a bicornate uterus with pregnancy in one horn by lipiodol without interrupting the pregnancy.

In addition to being a valuable means of determining patency of the tubes or of determining the point at which obstruction in the tube has taken place, injection of iodine in oil is offered as a positive means of confirming diagnosis of double anomalies of the uterus and of making a proper classification of the anomaly.

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SPEECH TRAINING

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There is as yet no universally accepted science of corrective speech. The present-day experimenters are working from different angles to discover one, but it has been very difficult to find the best approach to the corrective process. Some have taken mere theory as the foundation upon which to build. What, then, is scientific and what is not scientific in speech-training?

When really scientific methods are made available for general use in speech-correction and development, quicker and surer results will be obtained in the field of effort than is usually the case to-day. In applying these methods the trainer, as well as the child's parents, must keep clearly in mind not only the mechanical processes of speech to be trained, but also the child's physical, mental, and emotional needs, all at the same time. The training must be applied with a view to securing the best resultant effects to the whole child. The nature of the subjective experience must be better understood, and the training must be adapted to the real nature of these experiences, as they come into the individual life. Too much of the help given to those with defective speech has been of negligible value, because the exact nature of the help required has not been understood.

The various corrective processes now being applied, may, and generally do, help some one phase or part of the needs of the child in correction. But before a system of corrective speech can be considered adequate and can be accepted as scientific, it must make available and applicable, in the shortest time possible, help that shall meet all the needs of the child. The true science then of corrective speech will be inclusive. It will begin by building up the general health of the body. When the surgeon and the dentist have completed their work, if any is necessary, and when in co-operation with the physician the health, diet, etc. have begun to receive attention, the definite training for speech is the next thing in order.

The attainment of speech may be thought of best as a definite process to be learned or acquired. The physical mechanism, the basis of speech, comes with birth. The use of the muscles as required in talking is all gained afterward. In acquiring speech, as in all learning, there must be the correct attitude toward the subject to be learned. The attitude is determined by the kind of emotions which the subject calls forth. The emotional nature furnishes the force within us that pushes us on happily into the events of life, or makes us draw back from them, or be negative to them. The emotions are capable of being trained as are the mental faculties. Therefore the scientific approach to the gaining of any new process of mental growth is the leading of the child happily into all new steps, with the desirable side of the emotional nature co-operating. To this extent emotional training is necessary to the acquisition or the correction of speech. During the whole process, if the trainer knows how to do her part, the child will be kept co-operative, made happy by the feeling of natural satisfaction which comes with growth and gain.

A child must be ready emotionally when he begins a course of violin lessons if the lessons are to be worth while, but this emotional preparation alone will not enable him to take up the instrument and produce music. When he is emotionally prepared, having the desire to learn to play, the driving force of his emotions carries him through his practice day after day. But his muscles must learn a definite course of procedure, however well-prepared he is emotionally. Each finger must learn to move in its own definite way on the instrument as the musical notes demand. The fingers move clumsily at first, even if the mind grasps instantly the thing to be attained. Day after day they must learn to move more definitely and with greater speed. Nor does the violin teacher tell her pupil to spend most of his practice-time moving his hands up and down, opening and shutting them, lifting objects, doing heavy work to develop the muscles of the hand. No, indeed! The instructor asks him to spend most of his practice-time in repeating the definite movements and exercises to be used in playing his violin, in order that he may perform with ever increasing skill.

And so with speech-training. It is a process to be learned. Therefore the emotions should be kept happily inclined toward this process as toward all steps in growth. Speech-training is no exception to this rule. But since an upset emotional condition may prevent the development of speech and other forms of growth, some trainers have overemphasized the retraining of the emotions as a method of speech-correction. The prepared, trained, emotional background does get the child ready for each new step toward progress in his life—ready for the learning of any new process, a new song, a new game, a new poem, a correct way of saying a word; ready for the eating of a new kind of food or for whatever comes in the course of the day's events. But each process to be learned, whether it be writing, playing games, piano-playing, or speech-attaining, calls for the acquiring of definite muscular habits, which are to be gained by awkward slow beginnings, through the laws which govern the habit-forming processes of the muscles.

The untrained person finds it difficult to analyze the rapid movements used in daily speech, and therefore finds it hard to visualize the process necessary for its best development and correction. In the same way lip-reading as used by the hard-of-hearing is impossible to the untrained because of the rapidity of the movements involved. The definite sequence of movements of the mouth for any given sentence is seen clearly only after long observation. But it is there, definite, exact, clearly observable to the trained eye, and is capable of being trained with equal definiteness.

Let us look at the whole speech mechanism. Consider it as if taken out of the body in imagination. It is a definite machine, working in a definite, exact way. Sir Richard Paget, physicist of London, has made a speech-machine which says "Hello, London, are you there?" It is easy to understand that his machine must be worked in an exact, definite way, or it would not speak.

Our speech-mechanism consists of an air-container, the lungs, an air passage out from the lungs to the larger air outside, vocal chords strung across the passage, causing air to vibrate, also an air-chamber, the mouth. For purposes of training, we do not need to picture the mechanism in detail. Under normal conditions it works in this way. A current of air moving outward is necessary to produce speech. Sir Richard Paget uses a bellows for his machine. We have a similar contrivance inside of us. The right amount of pressure from below, as the front "body-wall" moves inward, keeps this air pushing steadily upward, ready to be used by the mouth in the formation of its sequence of sounds. The work of the mouth is simply to change positions. Each sound requires a certain definite shape of the mouth. As these shapes change, different sounds are produced.

In order that the mouth may learn to change positions fast enough for acquired speech, it is necessary that the muscles repeatedly assume these shapes early. Articulate speech is the result of an acquiring process, begun in infancy through the random movements of the muscles of the speech mechanism, as all muscles in infancy are constantly tending toward action. During the first months the "speech" has no meaning. A little later, imitation is begun, and meaningless sounds begin to be used for a purpose. Muscles are moving into definite shapes, are getting their practice for the future. But mistakes creep in, for the acquiring is dependent through sight and hearing on the imitative ability of an infant. Muscular acquirements, right or wrong, are continually becoming fixed by repetition, and so "baby talk," for the time being, requires of the muscles movements which are not correct, therefore not permanent. In correcting speech at three or four years of age, there are constant changes in movements. The baby often says "tum" for "come." This means that the end of the tongue begins functioning. The perfect form "come" requires that the muscles at the back of the tongue begin to function. Any habit which first gets into a set of muscles leaves its tendency there to act. Nor does this tendency die out easily. In changing to correct speech the second tendency conflicts with the first. Is it not worth considering in experimentation that this kind of muscular conflict may be the basic cause for stuttering?

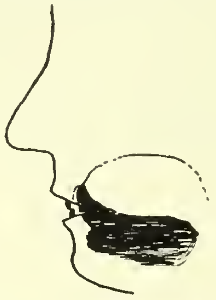

Fig. 1

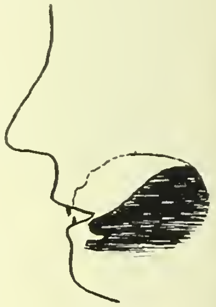

Fig. 2

Figure 1 shows the shape of the mouth as "tum" is begun. Figure 2 shows the shape for the beginning of "come." In correcting "tum" the two beginning movements may conflict, causing both movements to try to function at once. The tongue is pulled in opposite directions. It is blocked and cannot move immediately. If speech were guided in infancy, by training a few of the movements of the mouth which are most often confused, we feel sure that much future trouble could be prevented. If beginning speech is not trained, certain possible deviations from the normal will be sure to occur with individuals.

The longer these deviations in movements are allowed to function, the deeper the "paths" are worn inside, the more difficult is the correction. Correction should be made by substituting the correct movement or position for the incorrect. If the trainer can lead the mouth by degrees to gain the normal line of movements, the desired word will be spoken perfectly. This furnishes the correct pattern for future movements. Repetition, then, of this correct line of movements will in time bring about a new correct habit instead of the old incorrect one. Repetition makes a new "path" inside. The definite, correct forms for each word must be sensed and practiced again and again, until, through the kinesthetic sense, the mouth can pass unaided through the correct order of movements required for a given word or sentence.

The frequency of repetitions is an important element in correction. About six periods daily spent in practicing the new movements or positions should be woven in at regular intervals for best, quickest results. Two or three lessons a week are not sufficient to bring about correction in the quickest, most satisfactory way possible.

The writer changed certain movements of speech when old enough to sense the processes involved. The clinging of muscles to first habits, the slowness with which these habits are changed after childhood, the conflict due to changes, the confusion to best thinking, the emotional disturbance at the time—all were a part of the experience. From this personal sensing of the difficulties involved, the writer feels that the need of constructive work along the line of speech-correction is very great. There is much to be done by the future in training the beginnings of speech, thus preventing later trouble. All forces working sincerely for the good of childhood ought to unite in an honest effort to determine what are the real helps to speech problems and what are not. It is time that mere theory be laid aside, as well as all effort based upon speculation. It is time for the sake of the prevention of serious difficulty to untold numbers, that a science of corrective speech and speech development in the very young be worked out, as based upon the true nature of all the factors involved. I write this emphatically, because much help, so-called, does not help. It does not attack the problem from the standpoint of what is happening inside the one in need. Therefore, it is not "scientific." For instance, a teacher of speech told the mothers in a parent-teachers' meeting that the stutterer is one who is craving attention, and when unable to succeed in getting it along other lines, seeks this attention through stammering. Anyone who has at any time felt a conflict in his own speech muscles, knows that the average stutterer is the last one usually to seek attention. He may at times appear to do this, but the appearance is caused by his making a tremendous effort to compensate for the physical blocking he feels. He wants to talk, to feel the joy of social intercourse, but is prevented by this constant hindrance to his free expression. The cause of his trouble must be found by getting closer to the facts of the case.

To sum up: the physical condition must be corrected wherein there is any need. The emotional background must be normal to permit an attitude of growth. Correct speech is produced by a definite use of the speech mechanism acquired after birth. Defective speech comes as the result of a deviation or deviations in the use of the muscles controlling the mechanism. These incorrect movements become fixed through habit the same way in which the correct movements are fixed. The best corrective measures should aim directly to pass the mouth through the sequence of normal movements and positions which produce the word normally. This sets the pattern for future moving, which the daily frequent repetitions of the next months will fix in habit. In order to bring about this more effective training, the trainers must be prepared when mistakes are made to place the mouth quickly in correct position, and for the best good of the children emotionally, should be able to produce results without evident need of experimentation on their part. To help a child to succeed quickly is the key-note to continued interest.

The true science of corrective speech will include a training which shall build up the child physically and emotionally and at the same time develop the movements of speech in the quickest, surest, happiest way for the child concerned. Let us hasten the day that will see the practice of preventive rather than corrective measures, in connection with speech development.

HEROPHILUS, ERASISTRATUS ET AL, VIVISECTIONISTS

By W. Stuart Leech, M.D.

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In the misty ages one Herophilus, who was born at Carthage and who lived during the reign of Ptolemy Soter, and his contemporary Erasistratus, startled the intellectual world at that time by obtaining anatomical knowledge by dissecting living persons. At that time it was considered the greatest surgical triumph of the ages.

Tertullian, in mentioning Herophilus, called him "more butcher than physician," and says in his writings that he hated men and that he dissected six hundred men in order to learn the construction of the parts. These men died under the agonies to which the curiosity of the anatomist was pleased to subject them. In many instances these persons were condemned by the king's courts of justice and were termed malefactors. When handed over by the king's permission they were slowly cut up alive, yes, day in and day out while they were yet breathing and in possession of their mental faculties. Of course this was done with the full sanction of the lawyers and priests.

Physicians of this ancient class had the consciousness to call themselves rationalists, and they argued that it was not cruelty to thus vivisect malefactors. Within the profession they had their opposites in the so-called empirics who gained their knowledge by experimentation and who persistently maintained that it was unnecessary, cruel, and downright murder to cut open the chest or the abdomen of living men as the rationalists were doing. Celsus also called it cruel and unnecessary to dissect the bodies of living persons.

Life to these old Fathers was defined as a "perpetual action and motion," being the action of a soul or of nature upon the material body. Some called it a small flame in the heart, a vital spirit, an innate heat, an implanted and influencing spirit. Much was written concerning the humors (now the endocrines) of the body. A number of the wisest ones described the circulation of the blood, but did not consider the heart the propelling force. It is well to note that it was only a week ago that one of our German savants publicly made the same contention. Galen, from his dissecting observations says "The arteries diffused through the body supplying it with spirit, fluidity, and motion, whilst many of them branch out from the main one." In his book, De Alimento, he says "The liver is the root of the veins and the heart that of the arteries; from there the blood and spirits flow, and through these the heat is diffused."

We learn from Democritus, who was born B. C. 460, the father of the atomic theory, and who was a contemporary of Hippocrates, that when the latter was called to cure Abdera he reported to those who employed him that he found Democritus dissecting animals and that he was one of the wisest of men.

Anatomy in those days was in its swaddling clothes, and we learn from a disciple of Pythagoras that according to Chalcidius in his commentaries upon Timaeus that at that particular time Alcmaeon was the first to dissect animals in order to learn the parts of which their bodies consist. Incidentally he maintained that the soul was lodged principally in the brain and that it differentiated the various impressions as they were conveyed from the various parts of the body.

Our old friend and philosopher Aristotle applied himself to the study of anatomy as his writings abundantly convince us. There were periods when the study was a fad even with the artists and intellectuals, but dissection was rare. Alexander the Great supplied Aristotle with $750,000 for the purpose that he might bend his thoughts to the nature and properties of animals. Now we, several thousand years later when looking upon endowments, such as the Flexner Institute, Mayo Foundations, and the like, were under the impression it was something modern. Alexander also ordered him to be supplied with two thousand men from different quarters of Greece and Asia to obey Aristotle and communicate all they had learned from hunting and fishing that the anatomy and peculiarities of each species might be learned. According to Galen, among the many things described by the philosopher he described the cavities and the veins of the heart and gave the aorta its present name. In the fourth book of Hippocrates, called the De Corde, we find the word "Aorta" used which was to the physicians of the sixteenth century positive proof that the work was spurious.

Aristotle stated that the blood of the right ventricle was warmer than that of the left; however, his knowledge of anatomy was fragmentary. We cull from the Medical Fathers that it is true that Herophilus and Erasistratus really dissected living human bodies; the latter in his writings speaks of a man whose brain he dissected while yet alive. And Galen assures us that Herophilus did not learn by the dissection of beasts, as "physicians usually do," but principally by the dissection of men. This human vivisection was done at Alexander, the capital of Egypt, under the protection and the direction of kings. Some were thus under the impression that they might be able to capture the "bug" of immortality or at least to be able to greatly prolong their own lives.

We can find no proof that either Hippocrates or Aristotle dissected humans, and Aristotle confesses that he never dissected anything but beasts.

Herophilus was considered by the middle age Fathers as a great anatomist, and as proof of his knowledge the names he assigned to the various parts are still preserved, although all of his writings are lost. His fellow creatures paid a fearful price for so small a knowledge.

We find even Galen advising, first, the dissection of apes and, if the opportunity presented itself, a finishing course with human beings. When the Germans made war upon Marcus Aurelius, Galen states that little was learned from dissecting German prisoners except a knowledge of the viscera, which was due to the students not having dissected apes and other animals first. In the ancient archives we read often of "Exposed Children" being dissected, and their dissection even being advised.

Drawing our conclusion from interlinear reading we would say that the children were first kidnaped and then dissected generally while living. Does reincarnation explain the depth of cruelty manifested by some of our recent child murderers?

BOOK NOTICES

International Clinics. By Henry W. Cattell, M.D., Editor. Vol. 1, 38th Series, 1928. 307 pages. Illustrated. Philadelphia and London: J. B. Lippincott, 1928.

Lewellys F. Barker opens this volume with an article on "Changing Aspects of Medicine in America," dealing with recent medical research in America, changes in medical education, societies, and journals, concluding with changes in medical practice.

It is a general survey of present conditions in all these respects as compared with what existed a generation ago. There is a definite progressive movement in all lines and especially marked improvement noted in the work of the general practitioner of to-day as compared with thirty years ago. The New World has entered a new era in medical science and practice, however still co-operating with the Old World, contributing a large share of medical knowledge in all its aspects.

A. McPhedran, in a short article, reviews the work done in Canada in the past few years.

The voluminous writer, James J. Walsh, of New York City, has an interesting resumé of medicine in the last thirty years that calls attention in a more specific way to the more outstanding medical advances in diagnosis, treatment, and prognosis.

A timely paragraph on hypnotism is very interesting as also a few more paragraphs on the status of the treatment of tuberculosis to-day, with special reference to what Koch has done since his historical discovery. He has a few worthwhile observations on the use of endocrine products, specific serums, and light therapy. This is followed by a kind of symposium on infections of the bones of the jaws, that appears to be a masterly scientific exposition of the pathology and treatment of lesions in those regions. It comes from Cologne, Germany, and is the work of Siegmund, Weski, and Loos.

A medicosocial subject on "Venereal Diseases and Marriage Consent" brings out conclusions that are very much underestimated by the medical profession. Dr. Zumbusch, of Munich, believes that marriage consent may be given only after two years when people have been treated energetically and abortively during the primary stage of syphilis. The patient must never have had a positive seroreaction before or during those two years.

A very interesting paper, "Injury to Genitourinary Tract," is the next subject that has special reference to industrial surgery and compensation. It includes case reports and comments by A. J. Fraser, of Winnipeg.

"Ossifying Hæmatoma" by E. J. Eliason, of Philadelphia, comprises many case reports, *x*-ray pictures, and an extensive bibliography. This is followed by "Ruptures of Muscles and Tendons" by Brickner and Milch, of New York City. It is a logical sequel to the predecessor in dealing with injuries to muscles and tendons.

The prominent mention that different modalities of physiotherapy is receiving of late is also present in this conservative edition, in the form of two articles dealing with treatment of the pelvic viscera. Comberbatsh, of London, is very emphatic in his convictions that diathermy to the pelvic viscera is a definite specific for the treatment of chronic gonorrhea in women. He, however, insists on the application of heat to a degree beyond what any of us have dared to use, namely, to the amount of 114 and 115 degrees Fahrenheit. He is governed mostly by the tolerance of the patient rather than the thermometer or the reading of the machine. He calls attention to many cases of arthritis of hidden etiology that have responed wonderfully to this treatment, both as regards the effect of curing up chronic infections to viscera, as well as the tonic effect it has on the endocrine function of the ovaries.

Daniel Longaker, of Philadelphia, follows this foreign paper by one on "Treatment of Cervicitis" by the use of bipolar diathermy and consequent coagulation and fulguration methods. He feels that just the medical diathermy alone is not sufficient but adds surgical coagulation under light anesthesia. In this manner he believes that trachelorrhaphy is seldom necessary; that the new method is bloodless and more aseptic and can be done in office practice.

Seale Harris, of Birmingham, Alabama, presented a dissertation on the "Etiology of Pernicious Anemia," which is a review of the different theories on the cause of this disease. He concludes that the liver secretes an endocrine that controls the hemolytic action of Kupffer cells in liver and that the pathology in liver found in pernicious anemia may be the cause of the inhibition to this anti-hemolysin. He doubts the specificity of infection as an underlying cause but any infection that affects the liver, causing hepatitis, might do it. Dr. Harris has another paper on the treatment of pernicious anemia that deals mostly with liver and liver extracts.

"Gastric Syphilis," by Schnabel, of the University of Pennsylvania, is an interesting paper on that ever-puzzling condition.

"Bronchiectasis," Diabetes Mellitus," and "Diagnosis of Pulmonary Tuberculosis" comprise the next three papers, and are all very valuable and instructive to read.

The surgical section of the volume reviews the advances in surgery in the last thirty-seven years since the founding of International Clinics and is done by Lockwood, of Pasadena, and Henderson, of Rochester.

Next the venerable John B. Deaver, of the "Worlds," discusses three prevalent and common conditions, namely, bleeding from the non-pregnant uterus, chronic salpingitis, and chronic appendicitis. In his inimicable and clear-cut manner he presents these three all-important subjects in such a way that everybody ought to read every line of it.

Fred Albee, of New York City, follows him with a dry clinic of his own on arthroplasty; non-union fractures; bone graft; etc., that would interest the surgeon, as well as the general practitioner. He makes some mention of new technic that looks promising for definitely better end-results in arthroplasty.

The physcology department has one paper by Lodholz, of the University of Pennsylvania, entitled "Death from the Standpoint of the Physiologist." It deals strictly with the materialistic physiologic aspect of death. Nothing to do with the metaphysical or psychic nature thereof. Pathology is represented by G. R. Callender, of Washington, D. C., with a paper on "Hemochromatosis."

"Hygiene, Preventive Medicine, and Public Health Since 1891" is reviewed by Hugh S. Comming, Surgeon General, United States Public Health Service.

The 150th volume of International Clinics closes with an interesting economic paper by Michael M. Davis, of New York City, and a classical thesis on Medical History with reference to the early treatment of the great pox at its early beginnings.

—Arnold L. Hamel, M.D.

Studies in the Psychology of Sex: Eonism and Other Supplementary Studies. Volume 7. By Havelock Ellis. 532 pages. Price $5. Philadelphia: F. A. Davis Company, 1928.

The name of Havelock Ellis has been well known to students of abnormal psychology during the last quarter of a century. The author has published six volumes prior to the present one. This last one, he says, "consists, in part, of essays and fragments left over from the main volumes because dealing with subjects which had not yet assumed sufficient importance or taken clear and definite shape; and in still larger part of studies that are by-products of my investigation, lying on the borderland of the field of sex, partly in and partly out of it, but suitable to discuss here because here we are able to attempt to determine their precise sexual aspects." He is drawing together the last threads of his studies which have occupied so large a part of his life.

There are nine chapters dealing with more or less unrelated subject matters, starting, for instance, with "eonism," a term which he uses to refer to the tendency to behave and dress like the opposite sex without, however, any signs of inversion, to the final one, Chapter ix, which is a history of marriage.

Chapter viii deals with kleptolagnia, a term devised by J. G. Kiernan, adopted to apply more specifically to the impulse of stealing accompanied by sex feelings. It is well known that there are a group of cases of kleptomania who, during the episode of stealing, experience no sex feeling. Havelock Ellis discusses at length the theories of Stekel, who regards the act of theft as a symbol of repressed sex desire.

The value of some of Ellis' works has been questioned for one reason, that he has not made possible the publication in the literature of a comprehensive history of his own life.

—J. C. Michael, M.D.

Neoplastic Diseases. A treatise on Tumors. By James Ewing, M.D., Sc.D., Professor of Pathology at Cornell University Medical College, New York City, Third Edition, Revised and Enlarged. Octavo of 1,127 pages with 546 illustrations. Philadelphia and London: W. B. Saunders Company, 1928. Cloth, $14.00 net.

This authoritative work was first published in 1919, then reset in 1922, and six years later has been carefully revised to accommodate the steadily expanding knowledge of neoplastic diseases.

The chapter on tumors of bones has been entirely rewritten on the basis of the study by the Codman Registry of Bone Sarcoma. The classification of mammary cancer has been simplified, and the section on brain tumors has been brought up to date.

The subject matter has been revised to include points of practical and theoretical interest, illustrations have been added, and the references to the literature have been checked and verified.

This newer edition has maintained the original standard set by the author and presents within a reasonable space and accessible form the main features of the origin, structure and natural history of tumors.

—A. W. Dahlstrom, M.D.

A Text-book of Physiology: for Medical Students and Physicians. By William H. Howell, Ph.D., M.D., Professor of Physiology in the School of Hygiene and Public Health, Johns Hopkins University, Baltimore. Tenth edition, thoroughly revised. Octavo of 1081 pages, 308 illustrations. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, $6.50.

In Dr. W. H. Howell's tenth edition of his book he has revised each section and introduced all that is new in each field. His book has always stood among the leading physiology references, and this edition keeps it there. Each subject is taken up very thoroughly and completely. By presenting only the essential facts he makes it possible to obtain the latest knowledge of normal function of tissues and organs, thus making it an ideal textbook for the student and reference book for the physician.

—A. N. Bessesen, Jr., M.D.

THE
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THE STATISTICS OF INFANT MORTALITY

We are indebted to Dr. S. J. Crumbine, General Executive of the American Child Health Association, for a statistical report of infant mortality for the year 1927, gathered from 716 cities of the United States of over 10,000 population.

Few, perhaps, of our readers appreciate the values to be found in such a record. It serves as an index to the progress of the country in the registration of vital statistics. In graphical and map form it pictures the growth of the United States Registration Area for Births and Deaths. It shows still some backward people in the few remaining states which have failed as yet to come up to the requirements of the National Public Health Service.

It is possible for a state to be a competent candidate for the Death Registration Area and unqualified for the Birth Registration Area.

The Birth Registration Area was established in 1915 and then covered ten states and the District of Columbia. The Death Registration Area was somewhat less limited, but included only 24 cities from which complete mortality records could be obtained. To-day 42 states and District of Columbia are numbered in joint birth and death areas; two states, Colorado and South Carolina, are in the death area only, while four states, South Dakota, Nevada, New Mexico, and Texas, are still outside the pale of both. From 87.3 to 91.3 of the total population of the country is within these areas.

This report, prepared annually by The American Child Health Association, concerns itself directly, of course, with the mortality of the early years of life, but the statistics it presents have their bearing upon human health and longevity as a whole. The reduction of the infant death rate means the lengthening of the average span of human life. But it means more than this: it involves a readjustment of the entire table of death causes. If children outlive infancy and childhood, they live, or are apt to live, to those years in which other death causes characteristically prevail. If they do not die of gastro-intestinal and respiratory diseases, or of the contagious maladies that youth suffers, they may go on to the life periods in which heart disease and cancer claim their heaviest toll. If they escape the dangers of tuberculosis below the age of fifteen, we have to see to it that tuberculosis is also controlled in youth and maturity in order to keep its death rate down. We may lengthen life only to give the mortuary risks of later years a stronger stranglehold upon their victims. We live longer, but we may die harder in the end.

Nevertheless, the gain in human life, as a whole, is great. Four generations ago the average at death was 28; to-day it is 56 and gaining steadily. That is what preventive medicine and public health work have done for us, and mostly in these later days.

And see what they have done for the babies! The average infant mortality rate in these 716 cities of the country for the year 1927 was 64.9 in every 1,000 live births, the lowest average point it has ever reached. In 1926 it was 73.7 and in 1924, the lowest previous rate, it was 72.2.

Yet this is but an average, and in certain parts of this land of enlightenment the death rate in infancy is still deplorably high. That it is a matter of light and leadership, and not merely a matter of density and type of population, or even of climate, is shown in the following table of infant death rates in the ten largest cities of the country:

New York and Cleveland	56
Saint Louis	57
Chicago	63
Philadelphia	64
Los Angeles	67
Detroit	70
Pittsburgh	72
Boston	76
Baltimore	82

Taking the ten lowest and the ten highest urban infant mortality records by states, one has a chance to see how great is still the possible gain:

Low rates	
North Dakota	46
Washington and Oregon	47
Minnesota	48
Idaho	54
Utah	55
California and Connecticut	57
Montana	58
New York and Nebraska	59

High rates	
Maryland	82
Arkansas	83
West Virginia	84
Maine and Tennessee	86
Mississippi	88
Virginia and Louisiana	89
North Carolina	106
Arizona	115

The average of these low urban rates is 5.9 points below the average of the cities at large; the average of the high urban rates is 25.9 above.

Among the optimum death rates of infants in individual cities of over a quarter of a million people, may be noted:

Seattle	41
Minneapolis	47
Portland, Oregon	47
San Francisco	50

St. Paul, among cities of between 100,000 and 250,000 people, with the low death rate of 49, ranks high.

These five cities with the low average rate of 47 are 17.9 points better than the average rate for the cities of the country at large.

THE EDUCATIONAL MOVEMENT IN MEDICINE

There is such a thing as a divine discontent. It may be quite unconsciously divine; yet insofar as it makes constructively for individual or communal betterment, the quality of the divine is there.

Nowhere does such a discontent evidence itself so definitely to-day as in the mind of maturing youth seeking to work out its destiny in the colleges of Liberal Arts throughout the country. It not only implicates the better part of the student body, but it extends to those leaders in the faculties of the schools who are still endowed with the creative capacity which characterizes continuing youth.

So energized by minds still young, still initiative, still thinking, it is effecting changes alike significant and profound. In principle, briefly stated, it is expressing itself,—releasing itself, in the terms of intellectual freedom disciplined to definite purpose. In method it is adapting the relative independence of graduate study to undergraduate need.

Its credo, so far as it has any formulated faith, is education working from within rather than tutored from without. It is intent upon inspiring the thinker, rather than upon storing a mental encyclopedia with ready reference facts. Antioch, Wisconsin University, Bennington College, Vassar, Smith, and Radcliffe are among the centers of this emancipative movement.

Through the avenue of the Arts Colleges, students are entering the schools of medicine, and it is quite inevitable that, sooner or later, this potent discontent, this spirit of redemptive unrest, this will for freedom from the educational shackles of the past, must make itself felt there. Still it is the consensus of opinion that the present liberative movement has not yet reached the professional colleges.

If it has not sensibly touched the spirit of medical education, it may be taken as evidence of the fact that the earlier growth of the schools, which was great, has been palsied; that habit and custom have encased the curriculum with pedagogic barnacles encumbering its progress; that in certain undergraduate schools the hope of intellectual and academic freedom they once cherished has been replaced by a loss of student morale, embarrassing the effective exercise of the student mind. For it is, generally speaking, true that youth to-day desires the attainable-best by way of preparation for its chosen calling, whatever it be; and that, commonly, through the expression of undergraduate or alumnar influence, what it wants it gets.

The present status of medical education is of more than academic interest to readers of medical journals and to medical practitioners everywhere. True as it is that the educator in medicine is becoming generic and is destined soon to constitute a distinct calling, nevertheless, the concern of a profession for its professional offspring remains paternal. That concern is, in itself, the highest hall-mark of any profession and is not conditioned upon the pedagogical part it plays toward its followers. The relation of the parent to the teacher, of the home to the school, is one undergoing deep cultivation in human society everywhere, and it should have a professional, as well as a personal and social, significance.

The physician and his calling, as a whole, should exercise a profound influence over the progress of medical education, and that notwithstanding the fact that, in the end, it is the student in his group status who determines the development of his school.

It is just because of this vital relation of the student body to its own educational fortunes that the lessening of student morale becomes so critical, so disastrous, a thing.

There are various tests by which the fitness of a modern day medical school program may be tried out. There are ideals that should be striven after. There are standards that must be maintained, while there are methods which provide for a large measure of elasticity in the exercise of teaching functions. There are considerations which bear upon the adequacy and the quality of the output of the schools. There are obligations to the profession and to the public that must be met.

It is the purpose of The Journal-Lancet to discuss these several problems editorially in succeeding issues.

A DEATH IN THE FAMILY—BEATRICE

We gave in a recent issue a couple of the "choice bits" that drift into the Department of Vital Statistics of the Minnesota State Board of Health. Perhaps we should say that are drawn into it by the efforts of the head of the Department in her efforts to keep her records straight or scientific.

Such a choice bit is the following tender expression of the feeling of a big-souled physician who had lost a patient from an unknown cause, and gave this expression to his feelings when the Department sought to complete its statistics.

A "Beatrice" is found in the experience of every family doctor. This one in the form of "a little red rose" was found many years ago in the garden of Dr. Dirk Van Der Linden Gleysteen, of Lamberton, Minn., when we wrote the doctor requesting permission to use some of his letters we received the following answer:

Dear Doctor Jones:

I received your letter yesterday, I need not tell you that I felt very much flattered by your remarks and request. Of course you may use them, but, doctor, the letters are dead. Would you resurrect them like the children of the Prophets who lie buried in the Vale of Jehoshaphat and whose naked bodies shall at the sound of the great trumpet creep out of their graves to hear their doom? At the feast and the dance, with the glow of the wine coursing through their bodies these may, in the eyes of their lovers, have been attractive, even beautiful. But robbed of all dress, in the cold, steel-grey setting of the Judgment Day the Arch Angel, if he have a sense of humor, must turn aside his head to hide a grin lest he cause confusion in Heaven.

So with the doctor's permission, but without his fears, we reproduce below as a "choice bit" of the vital statistics the following beautiful story of

BEATRICE

> "Suffer the little children to come unto me, and forbid them not, for of such is the kingdom of Heaven."

Near the end of the street, at the edge of the village, just where the town and country meet, there stands a brown house with green roof and low sloping eaves; the porch is arched and the windows are large. On one side, and in front of the house, is a lawn of green grass well trodden by little feet in the summer and covered with snow in winter. On the other side of the house where the soil is more protected and the sun shines all day long there is a small flower garden. Here from early spring till late in the fall one may see a variety of color and if the breeze comes towards the observer he may also smell the blended perfume of all the flowers in the garden. The garden is not large nor are the flowers pretentious. There are peonies, gladiolas, hollyhocks and a row of flags, which have the earliest blue flowers in the spring. There are also a few lilies, cold, austere and erect, which open their throats to the honey bee and the humming bird, but these just fly about them and admire them, they are too awestruck by their austerity to soil the virgin whiteness of their chalices. They would rather flutter about the rose, the honeysuckle, the mignonette and the daisy; these they caress and kiss and fly away and then return to caress and kiss them again.

In one corner of the garden, somewhat more protected than the rest, and almost hidden by the deep green foliage of the English delphiniums and the broad leaves of the foxglove there stood a little rose bush. On this bush were three roses, one almost full blown, one half blown and one an opening bud. When the first rose opened and unfolded its large red petals exhaling a perfume before unknown in the garden it was admired by all the other flowers, when the second rose opened its damask cheeks, uncovering its yellow bosom and sending out its exquisite fragrance, it was immediately envied by all the other flowers; but when the third rose started slowly to unfold its leaves, the color of its petals was so soft, it held its head so modestly, and sent forth such pleasing odors that it was loved by all the flowers of the garden and the birds and the bees and all the pretty insects called it their "little red rose."

By day the little red rose chatted with its sisters, sharing with them the attention of the birds and bees; it sent perfume-laden message to the other flowers in the garden and these sent back messages of love. The little red rose was so friendly, so helpful and cheerful that it cast its glow over all its neighbors, and even those whose petals were dull and faded sighed as they thought of their own youth; but the withered old stocks, now bearing nothing but a crown of seedpods, felt a thrill of life when they received their morning greetings from the rose. At night the dew washed the dust from the flowers and brightened their foliage, and then, when all the world had gone to bed, and there was no one to see them but the moon and the stars, the fairies came and played with them and danced with them and told them wonderful stories of a dream land where there were beautiful gardens and never fading flowers; and the fairies only left them when the faint light in the east warned them that soon the day would come and they would have to surrender their companions to the birds and butterflies.

One morning after the fairies fled it was noticed that the full-blown rose was gone. The little red rose questioned the birds and the bees that came to the garden, but none had seen it go or knew where it went. All the flowers were sad that day and mourned the loss of their beautiful companion. The two roses questioned every insect that came near them, but none could tell; they asked the wind which carressed them softly then, but the wind only sighed and had no answer. The two roses hoped their sister might return but as the days went by and she did not come back they gave up hope; the other flowers became more sympathetic and the roses to show their appreciation sent out a sweeter fragrance.

The little red rose was now beginning to open quite widely, and was more and more sought after by the butterflies by day and the fairies by night. One night when the fairies had come to play and dance with the flowers the little warm red rose said it was too tired and would rather rest, so a little fairy nestled deeply between its petals and told it stories. And the fairy told it stories of a beautiful place where the flowers bloomed always, where their foliage was ever green for the heat of the sun did not wilt them and time did not wither them, for in that garden there were fountains of running water ever fresh, and the carols of the birds never ceased; there the multicolored insects flitted in a never-ending light and there the Master of the garden came to bless these His children to everlasting youth and happiness. And the little red rose asked the fairy whether it was there her sister had gone, and the fairy answered it surely must be. But dawn was approaching and the fairy had to fly away. All day long the little red rose thought of that wonderful garden and a great longing to see her sister came over her. She did not want to leave the other flowers, but she did long to keep her freshness and her beauty, she longed to be eternally young and happy and she was sure the fairies would tell the other flowers and they would all soon follow her. So when evening came she silently folded her petals and flew away to that wonderful garden, and when she came there her sister and all the birds and bees and flowers and all the gaudy insects and the sparkling fountains of water welcomed her, and the Master came and gave her a place in His garden of flowers and blessed her with all her companions, to eternal youth and joy unending.

The following morning, when the flowers in the little garden awoke, they missed the little red rose but there was no sadness for there was greater joy in remembering her sweetness than sorrow for her departure. And all the flowers, the young buds just opening and the full blown blossoms, those with bent stems and those with faded leaves, even the white and withered stalks, bearing nothing now save only the seed pods of hope, sighed and wished that they might be that day where the little warm red rose was.

MISCELLLANY

MEDICAL HINTS FOR HOUSEWIVES

Don't expect to get the best service if you call the doctor between midnight and beauty sleep. Even a grocer would hate to get out of bed to put up a yeast cake.

Don't ask the doctor what ails your neighbor. He might tell you and then you'd be adding her troubles to you own.

Ask the doctor now and then if he needs money. This always makes a hit. He will give you the reputation of being a humorist.

It's no disgrace to be sick. The disgrace comes if you stay sick and enjoy telling about it.

Don't tell your doctor about the floral wreath you sent when your former physician died. He may not be a lover of flowers.

If your family physician tells you that your body is not sick and that you don't need a physician, don't get mad and consult another physician. He may be honest, too.

Say nothing derogatory to your doctor about your former physician. It may divert his attention to thinking how long it will be before he gets his.

—The Northwestern Health Journal

NEWS ITEMS

Dr. E. E. Shrader, of Watertown, Minn., has moved to Huntington Park, Calif.

Dr. Frank J. Abts is again located at Yankton, S. D., having returned from Omaha.

Dr. A. R. Hall, of St. Paul, was married today to Mrs. Maude Boal, of Canada.

Dr. Horace Newhart, of Minneapolis, has returned from a two-months trip to Europe.

Dr. Gordon R. Kamman, of St. Paul, was married last week to Miss Patricia Grant, of the same city.

Dr. Claude C. Kennedy and Miss Gladys Travis, both of Minneapolis, were married on September 1.

A campaign for raising $50,000 for the enlargement of St. Joseph's Hospital of Minot, N. D., is under way.

Dr. F. E. Clough, for many years head of the Homestake Hospital at Lead, S. D., has settled in Pasadena, Calif.

The Fairmont (Minn.) Clinic and Hospital were opened on September 1, by Drs. Blanchard, Gardner, and Miller.

The infirmary of the North Dakota State Tuberculosis Sanatorium at San Haven has been equipped with individual radio headsets.

The State institutions (insane hospitals, feeble-minded schools, Home for Crippled Children) of Minnesota, are full to capacity or overflowing.

The Minnesota State Board of Examiners of Nurses will conduct examinations on October 4 and 5 at St. Paul, Duluth, Rochester, and Crookston.

A course of lectures on neuropsychiatry covering fifteen weeks has been opened by St. Paul specialists at the Mounds-Midway School of Nursing.

Dr. H. M. Berg, of Jamestown, N. D., is at Ann Arbor, Michigan, doing postgraduate work in roentgenology under Dr. P. M. Hickey in the University of Michigan.

The Worthington (Minn.) Clinic Hospital Association has awarded the contract for the construction of an office building to cost $15,500 and to be finished by January 1.

Dr. Wilson A. Allen is still practicing medicine in Rochester, Minn., though 94 years of age. He graduated from the General Medical College of Chicago in the class of '79.

In our last issue the names of the North Dakota State Board of Sterilization appeared, and the name of Dr. H. W. Miller was given as a resident of Grand Forks, which should have been Casselton.

Dr. H. A. Burns, of Minneapolis, who recently took a position on the Staff of Minnesota State Tuberculosis Hospital at Walker, has been appointed Superintendent of the Hospital to succeed the late Dr. P. M. Hall.

Dr. W. F. Braasch, of Rochester, accompanied by his wife, has gone to Europe. He will visit the clinics of Germany, Paris, Berne, and Vienna. He will attend the Urologic Congresses in Berlin and Paris and will read a paper at the former.

Dr. A. A. Whittemore, State Health Officer of the North Dakota Department of Public Health, has been invited to explain at the American Public Health Association, which meets in Chicago, October 15-19, his system of registering data in public health work, which has already been adopted in over a dozen states.

Pine City, Minn., honored the memory of the late Dr. Robert L. Wiseman, of that city, by naming its city park after him last month. Speeches were made by Dr. J. F. Savage, of St. Paul, a boyhood friend; Dr. E. L. Stephan, of Hinckley, a former co-worker; the Hon. J. Adam Bede; and others. The medical profession was honored by Dr. Wiseman.

Dr. Leslie Grant Hill, of Sioux Falls, S. D., has turned over his practice to Dr. Grove Baldwin, and will do postgraduate work in the East before locating on the West Coast. Dr. Baldwin has just recently returned to the United States after practicing for several years at Hilo, Hawaiian Islands. He comes to Sioux Falls from New York City, where he has been doing postgraduate work for some months.

Dr. John H. Rindlaub, senior member of the well-known Rindlaub Eye, Ear, Nose, and Throat Clinic of Fargo, N. D., has gone to Passadena, Calif. Dr. Rindlaub practiced in Fargo for over thirty years. He was always prominent in medical circles and did much for the advancement of scientific medicine in the State and Northwest. He was president of the North Dakota State Medical Association in 1926 and was a member of a number of medical societies in other states. He carries with him the good-will and the esteem of the entire medical profession of North Dakota. The Drs. Martin P. and Elizabeth P. Rindlaub will continue the work of the clinic.

Locum Tenens Work Wanted

By a middle-aged graduate of an A1 medical school. Available at once. Address 508, care of this office.

Half-Time Laboratory Work Wanted

In Minneapolis by a thoroughly competent technician with highest of references. Address 511, care of this office.

Apparatus for Sale

A 24-plate Bertman Static and X-ray machine complete for $75.00. Write P. O. Box 623, Fargo, North Dakota.

Experienced Technician Wants Work

Have had large experience in office work; in giving physiotherapy; and in *x*-ray work under a high-grade man. Address 518, care of this office.

Practice for Sale in Minnesota

A Park Region (Minnesota) unopposed $5,000 cash practice; town 800 population; good schools; gery. Am joining a clinic. Address 520, care of this office.

For Sale

One Fisher Diathermy. Costs $625. Will sell for $400. Just as good as new. Send check and I will send diatherma F. O. B. your town. J. L. Waldmer, M.D., Parkston, S. D.

Minneapolis Location for Physician

Have fine location for a physician in South Central District of Minneapolis. New building in a very fine locality. See A W. Scherven, 3763 Bloomington Avenue South; Drexel 2248.

Technician Wants Position

An *x*-ray technician, experienced in clinical laboratory, physical therapy, and metabolism; also a typist wants a position in a clinic or hospital. Thoroughly competent and can give best of references. Address 526, care of this office.

Technician Wants Position

Registered *x*-ray technician, experienced in clinical laboratory, physical therapy, and metabolisms; also an experienced bookkeeper and typist who is capable of taking entire charge of the business and is desirous of obtaining a position in clinic or doctor's office as technician or bookkeeper. Thoroughly competent. Address 519, care of this office.

Will Take in Partner

Will accept as partner upon investment of $2,000, German-speaking physician and surgeon of Catholic faith. A most satisfactory territory only 40 miles from Twin Cities awaits him if he be capable in surgery. Have unusually well-equipped offices and a small hospital with modern equipment in connection with same. Might also sell out if that be preferred. Address 528, care of this office.

Partner Wanted

Will sell half my practice in a good town near the Twin Cities at a reasonable price. Hospital connection. Prefer internist. Practice established twenty years. Address 522, care of this office.

Physician Wanted

A physician is wanted to take over a practice in a prosperous Minnesota agricultural community. Town of 800 and with one other physician. Should net at least $5,000 cash annually. Scandinavian preferred. Address 524, care of this office.

Good Opening for a Doctor

Good location for a doctor. Can be appointed health officer with sufficient salary to pay office and house rent. No other doctor in the County at this time. Address Robert Dunn, County Attorney, Center, N. D.

Office Work in Minneapolis Wanted

A young woman, tactful and conscientious, desires position with a group of physicians or surgeons in Minneapolis. Several years experience. Knowledge of stenography and filing. Best of references. Address 523, care of this office.

Physician Wanted

At once, young doctor for contract mining practice at Crosby, Minn. Salary $200.00 per month with car and lodging furnished, or $250.00 per month and lodging if doctor furnishes his own car. Address Dr. F. A. Allen, Crosby, Minn.

Opening for Doctor

A good doctor is wanted to take over a well-equipped hospital. Large territory. No other hospital within 35 miles. Must be a good doctor and have some money. There is work enough for two doctors. Don't write, but come at once. Robert E. S. Snell, Pine River, Minn.

Locum Tenens Work Wanted

Have completed most of my senior work including full time in General Medicine, Gastrointestinal and Surgery, both in the University of Minnesota Dispensary and University and General Hospitals. My personality and appearance will satisfy the most critical. Age 24. Address 529, care of this office.

Position Wanted in Clinic or Hospital

By a young woman of extensive training and experience. Is a graduate and registered nurse. Has taken courses in the University of Minnesota in chemistry, laboratory, *x*-ray, etc., and can do advanced work in these lines, and has had several years experience in office and hospital work. Can give testimonials as to efficiency and ability. Address 527, care of this office.

Dentist Wanted

Location in semiresidence section, Minneapolis. Present occupant successful, leaving to take additional schooling. Joint waiting room with doctor. Operating and work rooms, and rent is only $37.50, heated. Entirely modern, of course. Available November 1. Address E. E. Playman, 519 Marquette Ave., Minneapolis.

THE JOURNAL-LANCET

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Minnesota, North Dakota, South Dakota, and Montana
The Official Journal of the
North Dakota and South Dakota State Medical Associations
PUBLISHED TWICE A MONTH

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TRANSACTIONS OF THE SOUTH DAKOTA STATE MEDICAL ASSOCIATION—FORTY-SEVENTH ANNUAL MEETING—1928

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COUNCILOR—SECOND DISTRICT
H. W. SHERWOOD, M.D. .... Doland

COUNCILOR—THIRD DISTRICT
J. R. WESTABY, M.D. .... Madison

COUNCILOR—FOURTH DISTRICT
A. A. McLAURIN, M.D. .... Pierre

COUNCILOR—FIFTH DISTRICT
O. R. WRIGHT, M.D. .... Huron

COUNCILOR—SIXTH DISTRICT
FRED. TREON, M.D., (Chairman) .. Chamberlain

COUNCILOR—SEVENTH DISTRICT
R. W. MULLEN, M.D. .... Sioux Falls

COUNCILOR—EIGHTH DISTRICT
J. P. ISAAC, M.D. .... Freeman

COUNCILOR—NINTH DISTRICT
F. W. MINTY, M.D. .... Rapid City

COUNCILOR—TENTH DISTRICT
H. R. KENASTON, M.D. .... Bonesteel

COUNCILOR—ELEVENTH DISTRICT
A. E. BOSTROM, M.D. .... DeSmet

COUNCILOR—TWELFTH DISTRICT
CHAS. FLETT, M.D. .... Milbank

COUNCILOR—THIRTEENTH DISTRICT
G. E. BURMAN, M.D. .... Carthage

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ALTERNATE
S. M. HOHF, M.D. .... Yankton

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E. A. PITTENGER, M.D. .... Aberdeen
W. A. BATES, M.D. .... Aberdeen

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J. D. ALWAY, M.D. .... Aberdeen
W. D. FARRELL, M.D. .... Aberdeen

SECOND DISTRICT—WATERTOWN
J. B. VAUGHN, M.D. .... Castlewood

THIRD DISTRICT—MADISON
E. E. TORWICK, M.D. .... Volga

FOURTH DISTRICT—PIERRE
B. M. HART, M.D. .... Onida

FIFTH DISTRICT—HURON
H. L. SAYLOR, M.D. .... Huron

SIXTH DISTRICT—MITCHELL
E. W. JONES, M.D. .... Mitchell
E. M. YOUNG, M.D. .... Mitchell

SEVENTH DISTRICT—SIOUX FALLS

L. L. PARK, M.D........................Canton
M. A. STERN, M.D..................Sioux Falls
J. B. GREGG, M.D...................Sioux Falls

EIGHTH DISTRICT—YANKTON

E. M. STANSBURY, M.D...............Yankton
J. A. HOHF, M.D......................Yankton

NINTH DISTRICT—BLACK HILLS

R. J. JACKSON, M.D.................Rapid City
P. F. GEYERMAN, M.D............Hot Springs

TENTH DISTRICT—ROSEBUD

R. J. QUINN, M.D........................Burke

ELEVENTH DISTRICT—KINGSBURY COUNTY

CARL A. FEIGE, M.D..................Canovia

TWELFTH DISTRICT—WHETSTONE VALLEY

H. G. HARRIS, M.D.....................Wilmot

THIRTEENTH DISTRICT—MINER COUNTY

G. E. BURMAN, M.D..................Carthage

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J. R. WESTABY, M.D..................Madison
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O. R. WRIGHT, M.D......................Huron
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PLACE OF NEXT MEETING—MITCHELL

PROCEEDINGS OF THE HOUSE OF DELEGATES

First Meeting—Tuesday, August 7, 1928

The first meeting of the House of Delegates of the Forty-seventh Annual Session of the South Dakota State Medical Association was called to order at the Battle Mountain Sanitarium, Hot Springs, at 2:00 P. M., Tuesday, August 7, 1928, by the President, Dr. S. M. Hohf, Yankton.

The following Councilors and Delegates were present:

COUNCILORS

FIRST DISTRICT

R. D. ALWAY, M.D..............Aberdeen

SECOND DISTRICT

H. W. SHERWOOD, M.D...........Doland

FOURTH DISTRICT

A. A. McLAURIN, M.D.............Pierre

FIFTH DISTRICT

L. N. GROSVENOR, M.D...........Huron

SEVENTH DISTRICT

R. W. MULLEN, M.D...........Sioux Falls

EIGHTH DISTRICT

J. P. ISAAC, M.D................Freeman

TENTH DISTRICT

H. R. KENASTON, M.D..........Bonesteel

THIRTEENTH DISTRICT

G. E. BURMAN, M.D.............Carthage

DELEGATES

FIRST DISTRICT

C. J. LAVERY, M.D..............Aberdeen
W. A. BATES, M.D...............Aberdeen

SECOND DISTRICT

J. B. VAUGHN, M.D...........Castlewood

THIRD DISTRICT

E. E. TORWICK, M.D...............Volga

FOURTH DISTRICT

B. M. HART, M.D..................Onida

FIFTH DISTRICT

L. N. GROSVENOR, M.D...........Huron

SIXTH DISTRICT

E. M. YOUNG, M.D...............Mitchell

SEVENTH DISTRICT

L. L. PARK, M.D..................Canton
N. J. NESSA, M.D..............Sioux Falls

EIGHTH DISTRICT

J. C. OHLMACHER, M.D........Vermillion

NINTH DISTRICT

A. G. ALLEN, M.D............Hot Springs

THIRTEENTH DISTRICT

G. E. BURMAN, M.D............Carthage

The Secretary, J. F. D. Cook, M.D., of Langford, stated that the minutes of the 1927 meeting had been published in full in the August 1, 1927, issue of The Journal-Lancet.

A motion was made by Dr. Alway that the minutes as published be adopted without reading. The motion was seconded and carried.

Dr. Cook presented his report as Secretary, which was accepted and placed on file upon motion of Dr. Alway, with the exception of the item of redistricting, which, on motion of Dr. Alway, was laid over to a later meeting.

REPORT OF THE SECRETARY

At the time of my last annual report, our membership was 356, and during the balance of 1927 this was increased to 391, members. At this time the report shows 387 members in good standing with two honorary members in the Black Hills District. I hope before the year that those members in arrears will have paid up and can be reported as in good standing. It will be remembered, however, that the report last year was made three months earlier than it is being made this year.

So far as I can determine there is no general dissatisfaction with the work of the State Association, but it appears that there is a lack of appreciation of the advantages membership in the Association affords.

Membership

District	Members
No. 1, Aberdeen	81
No. 2, Watertown	23
No. 3, Madison	17
No. 4, Pierre	9
No. 5, Huron	21
No. 6, Mitchell	34
No. 7, Sioux Falls	60
No. 8, Yankton	46
No. 9, Black Hills	44—2 Honorary
No. 10, Rosebud	15
No. 11, Kingsbury	13
No. 12, Whetstone Valley	17
No. 13, Miner County	7
	387

Cash Received

1927	
May 3, Balance Cash in Bank	$ 653.87
May 5, Dues, A. L. Amesbury (1927)	5.00
May 5, Dues, L. F. Michael	5.00
May 9, Dues, Black Hills District	25.00
May 16, Dues, H. C. E. Meyer	5.00
May 19, Dues, F. E. Bouza	5.00
May 25, Dues, Watertown District	10.00
May 28, Dues, Mitchell District	15.00
May 31, Dues, Huron District	15.00
May 31, Dues, Fred Treon	5.00
June 1, Dues, P. T. Martin	5.00
June 14, Dues, G. B. Irvine	5.00
June 19, Dues, C. S. Bobb	5.00
June 19, Dues, S. K. Merdanian	5.00
Sept. 16, Dues, R. F. Sackett	5.00
Sept. 23, Dues, A. H. Hoyne	5.00
Sept. 29, Dues, H. E. Jenkinson	5.00
Sept. 29, Dues, Jos. Schwartz	5.00
Sept. 31, Dues, A. L. Jones	5.00
Nov. 8, Dues, Wm. Hunt	5.00
Dec. 12, Dues, Aberdeen District	20.00
Dec. 31, Interest, Liberty Bonds	4.50
Dec. 31, Liberty Bonds Converted	200.00
Dec. 31, Interest, Liberty Bonds ($500.00)	40.50
	$1,058.87

Cash Received

1928		1927
Amount Forwarded	$1,058.87	
Jan. 3, Dues, Yankton District	20.00	
Jan. 18, Dues, Rosebud District	60.00	
Jan. 20, Dues, Rosebud District	5.00	
Jan. 26, Dues, Rosebud District	5.00	
Feb. 1, Dues, Rosebud District	5.00	
Feb. 4, Dues, Whetstone Valley	50.00	
Mar. 6, Dues, Miner County District	35.00	
Mar. 10, Dues, Pierre District	45.00	
Mar. 14, Dues, Yankton District	165.00	
Mar. 14, Dues, Huron District	105.00	
Mar. 16, Dues, Madison District	80.00	
Mar. 16, Dues, Kingsbury Co. Dist.	60.00	
Mar. 16, Dues, Kingsbury Co. Dist.		5.00
Mar. 19, Dues, Black Hills District	185.00	
Mar. 21, Dues, Yankton District	5.00	
Mar. 23, Dues, Black Hills District	10.00	
Mar. 27, Dues, Aberdeen District	390.00	
Mar. 30, Dues, Sioux Falls District	295.00	
Apr. 1, Dues, Kingsbury County Dist.	5.00	
Apr. 14, Dues, Mitchell District	155.00	
Apr. 16, Dues, Watertown District	115.00	
Apr. 14, Dues, Mitchell Dist., E. V. Bobb		5.00
Apr. 16, Dues, Sioux Falls District	5.00	
Apr. 23, Dues, Mitchell District	5.00	
Apr. 30, Dues, Aberdeen District	5.00	
May 2, Dues Yankton District	15.00	
May 14, Dues, Yankton District	5.00	
May 14, Dues, Whetstone Valley Dist.	30.00	
May 14, Dues, Whetstone Valley Dist.		5.00
May 23, Dues, Yankton District	5.00	
June 2, Dues, Yankton District	5.00	
June 5, Dues Yankton District	10.00	
June 11, Dues, Black Hills District	10.00	
June 19, Dues, Black Hills District	5.00	
June 19, Dues, Mitchell District	5.00	
June 22, Dues, Madison District	5.00	
June 25, Dues, Mitchell District	5.00	
June 30, Dues, Whetstone Valley Dist.	5.00	
July 6, Dues, Aberdeen District	5.00	
July 10, Dues, Black Hills District	5.00	
July 13, Dues, Aberdeen District	5.00	
July 14, Dues, Black Hills District	5.00	
	$2,993.87	15.00
1927 Dues	15.00	
	3,008.87	
Liberty Bonds	500.00	
TOTAL	$3,508.87	

Expenditures—1927-1928

1927	
May 5, Voucher No. 54, Miss Alma Waltz, Registration	$ 6.00
May 5, Voucher No. 55, Thomas McNamee, Postage and Bills	25.78
May 5, Voucher No. 56, Royal Hotel, Room for Stenographer	6.45
May 5, Voucher No. 57, Marvin Hewitt Hotel, Guests	20.90
May 26, Voucher No. 58, Miss Barse, Steno	20.00
June 14, Voucher No. 59, Journal-Lancet	368.00
June 24, Voucher No. 60, Miss Haggarty, Stenographer	55.00
June 24, Voucher No. 61, J. F. D. Cook, June	50.00
July 1, Voucher No. 62, Cleveland Am., Ptg. Stationery	20.25
July 21, Voucher No. 63, Am. Medical Ass'n	15.00
Oct. 17, Voucher No. 64, Comm. State Bank Bond, Sec.-Treas.	2.50
Nov. 29, Voucher No. 65, L. Miles, Stamped Envelopes	17.38
Dec. 13, Voucher No. 66, L. Miles, Printing Blanks	9.93
Dec. 27, Voucher No. 67, Cleveland Am., Printing Cards	10.00
Dec. 31, Voucher No. 68, Journal-Lancet, July 1, 1927 to December 31, 1927	378.00
Jan. 31, Voucher No. 69, Farrar's Drug Store, Stationery	4.45
Feb. 28, Voucher No. 70, Telephone Co., Messages	9.40
Feb. 29, Voucher No. 71, L. Miles, Stamped Envelopes	18.98
Mar. 6, Voucher No. 72, V. E. Farrar, Filing Cabinet and Supplies	64.16
Mar. 28, Voucher No. 73, Harriet Obeman, Stenographer	4.50
Mar. 28, Voucher No. 74, Marvin Hewett Hotel, Council	12.30
May 9, Voucher No. 75, Am. Printing Co., Letterheads	5.00
May 15, Voucher No. 76, L. Curfman, Agt., Telegrams	16.77
May 18, Voucher No. 77, Journal-Lancet, January 1, 1928 to June 30, 1928	372.00
June 5, Voucher No. 78, R. L. Murdy, Del. A. M. A., 1927	50.00
June 21, Voucher No. 79, Lilly Co., Buttons	12.25
June 27, Voucher No. 80, Huffman Tpr. Co., Supplies	9.65
June 28, Voucher No. 81, L. Miles, Stamped Envelopes	13.32
June 29, Voucher No. 82, Lilly Co., Badges	10.50
July 5, Voucher No. 83, L. Miles, Postage	1.52
July 6, Voucher No. 84, J. F. D. Cook, Balance Salary	550.00
July 16, Voucher No. 85, Langford Bugle, Programs	91.50
July 25, Voucher No. 86, L. Curfman, Western Union	2.96
July 28, Voucher No. 87, Ellen Palmquist, Stamps	.88
TOTAL	$2,255.33
May 3, 1927, Balance Cash in Bank	$ 653.87
Cash Received	2,355.00
Liberty Bonds	500.00
	$3,508.87
July 31, 1928, Liberty Bonds	$ 500.00
July 31, 1928, Cash in Bank	753.54
Total Expenditures	$2,255.33
Liberty Bonds	500.00
Balance Cash in Bank	753.54
	$3,508.87

The following changes have occurred in the official family during the year: W. M. Quinn, of Winner, died during the year, and A. L. Severide, of Webster, moved to Portland, Oregon. The president appointed H. R. Kenaston, of Bonesteel, to act as councilor of the tenth district until the annual session. Chas. Flett, of Milbank, was appointed councilor for the twelfth district.

The committee on by-laws should take into consideration the recognition of those men who are in the Federal service, Veterans' Bureau, Indian service, and members of the military and navy organizations within our state. As the by-laws now stand these men are not eligible to membership in the State Association unless they are duly licensed to practice medicine in the state.

I believe that the new by-laws when adopted should give due consideration to the designation of those admitted to membership in the component societies, and admit to membership only those licensed as doctor of medicine (M.D. degree).

Resolutions and memorials adopted by the last House of Delegates have been distributed in accordance with their orders.

A hearty response and assurance of full co-operation was received from the congressmen and senators from this state, in all matters submitted to them for their consideration. Our representatives in Congress were appraised of the wishes of the Association relative to the proposed increase of the fee under the Harrison Narcotic Act to $3.00. It will be remembered that attempts have heretofore been made to do this. Evidently there is a determined group in Congress which feels that the medical profession should be required to pay the expenses of enforcing the narcotic law. That this is a ridiculous attitude is evident, but there are people so disposed. When this law was passed the medical profession agreed to the tax involved, not because it was felt that the tax was justified as such but because in no other way could Congress assume to pass a law involving police regulation. It had to be a tax measure in order to be constitutional.

Federal income tax deductions for traveling expenses incident to attendance on medical meetings have come to naught and unless pressure can be brought to bear to override those agencies in Congress opposing such deductions, we will not receive the relief asked for. Representative Robinson, of Indiana, has sought to overcome the obstacle to equalization in this particular, by the introduction of a House resolution providing that the deduction be allowed. So far this resolution has met defeat at the hands of the Senate committee on finance.

Our representatives in Congress have assured me that the medical profession are entitled to the relief prayed for.

The Sheppard-Towner Bill has not been disturbed so far as I know. The American Medical Association remains determinedly opposed to this or any other measure of this type.

SPECIAL MEETING OF THE COUNCIL

Held at Huron, March 28, 1928

At a meeting of the officers and Board of Councilors of the South Dakota State Medical Association at the call of President S. M. Hohf, at Huron, March 28, the following officers and councilors were present at a noon luncheon:

Officers present—

Dr. S. M. Hohf, Yankton, President.
Dr. N. K. Hopkins, Arlington, Vice-President.
Dr. L. N. Grosvenor, Huron, Second Vice-Pres.
Dr. J. F. D. Cook, Langford, Secretary-Treasurer.

Councilors present—

Dr. R. D. Alway, Aberdeen.
Dr. H. W. Sherwood, Doland.
Dr. O. R. Wright, Huron.
Dr. Frederick Treon, Chamberlain.
Dr. J. P. Isaac, Freeman.
Dr. A. G. Allen, Hot Springs.
Dr. A. E. Bostrom, De Smet
Dr. G. E. Burman, Carthage.

Dr. S. M. Hohf, presiding, called on Mr. Donald D. Jenne, of the U. S. Fidelity and Guaranty Co. to present group insurance. After a full discussion a plan was outlined to be presented to the House of Delegates by the committee on legislation. Dr. J. P. Isaac, chairman of the committee on by-laws, reported a draft of the proposed by-laws and the Council recommended the presentation for consideration and adoption by the House of Delegates.

Dr. A. G. Allen, of Hot Springs, representing the Black Hills Medical Society, presented a provisional program in which he outlined the available hospital facilities for the clinics at the Hot Springs meeting. He also presented a very interesting program of entertainment during and following the session, including a trip through the Hills to Deadwood for "The Days of '76."

The Secretary presented a financial report and outlined the needs of the legislative committee for funds to carry on recommended legislation. The matter was fully discussed by the officers and a motion by Dr. A. E. Bostrom, seconded by Dr. J. P. Isaac, that a special per capita assessment of $5.00 be made to be used for the purpose of legislation by the legislative committee. On vote this motion was carried.

Secretary Cook presented the necessity of establishing new boundaries for the various districts of the state which was adopted as outlined by the Secretary.

The Secretary presented a report of the South Dakota Public Health Association activities, also that of the Social Hygiene Association, asking that the officers acquaint themselves with the activities of these associations in their districts, and present at the annual meeting such recommendations as they may deem advisable for a fuller co-operation with these lay organizations.

Dr. N. K. Hopkins and your Secretary reported on the Regional State Medical Association Officers Conference held at Saint Paul in the Saint Paul Hotel on invitation of the Minnesota State Medical Association, January 15, 1928. The plan outlined by Dr. Braasch, of Rochester, and Dr. Myerding, of Saint Paul, for a regional organization comprising the states of Wisconsin, Minnesota, Iowa, North and South Dakota. Iowa was invited but was not represented at this meeting. A temporary organization was formed with Dr. Braasch as president and Mr. George Crownhart, of Madison, Wisconsin, as secretary. It was decided to meet at Minneapolis the day preceding the meeting of the A. M. A. and at this time perfect the organization and outline a definite program. Object, to better acquaint the state organizations with problems of mutual interest to our various state associations, looking toward fuller co-operation in matters pertaining to public health and welfare, legislative policies, education and publicity.

REDISTRICTING THE STATE

It has become apparent to the Council that the state should be redistricted. It is immediately apparent that, when one begins to consider this problem, it is impossible to so divide the state into councilor districts as to provide for an equalization of counties on either a numerical, territorial, or population basis, neither is it possible to make the division entirely on the basis of railroad accessibility or trade territory. However, it is possible to take all these factors into consideration and form a fairly good conclusion as to how the division should be made. The Board of Councilors in arriving at its decision started out with the present arrangement of counties into councilor districts taking into consideration their difficuties and advantages. It is appreciated that the highway developments will be a large element in the changing of boundaries of these districts as the development of our good roads progress. Attention is directed to the accompanying map, where the suggested boundaries are outlined in red. A little close scrutiny will show that each district includes fairly well the best transportation facilities as between centers of population. The highway map of the state is a definite aid in arriving at the various boundaries.

District No. 1.—Aberdeen: All of Marshall county, the west half of Day, all of Brown, all of Spink excepting Doland and Frankfort, Faulk County, Edmunds, McPherson, Campbell, Walworth, Potter, Dewey, Corson, that portion of Ziebach north of Federal highway No. 212, and Perkins County.

District No. 2.—Watertown: Codington County, Deuel County, Hamlin, Clark, and the cities of Doland and Frankfort in Spink.

District No. 3.—Madison: Lake County, Brookings, and Moody.

District No. 4.—Pierre: Hughes County, the west half of Hyde, Sully County, Stanley County, Ziebach south of Federal Highway 212, and Haakon.

District No. 5.—Huron: Beadle County, Hand County and the east half of Hyde.

District No. 6.—Mitchell: Davison County, Hanson County, the west half of McCook, west of U. S. 81, north half of Hutchinson, Sanborn County, Jerauld County, Aurora, Brule, and Buffalo County.

District No. 7.—Sioux Falls: Minnehaha County, east half of McCook, north half of Turner, and Lincoln County.

District No. 8.—Yankton: Yankton County, Clay, Union, south half of Turner, south half of Hutchinson, Bon Homme, Charles Mix, and Douglas.

District No. 9.—Black Hills: Harding, Butte, Meade, Lawrence, Pennington, Jackson, Washabaugh, Washington, Custer, Fall River, Shannon and Bennett.

District No. 10.—Rosebud: Lyman, Jones, Mellette, Tripp, southwest portion of Brule west of the Missouri, Gregory and Todd.

District No. 11.—Kingsbury County.

District No. 12.—Whetstone Valley: Grant, Roberts, and the east half of Day County.

District No. 13.—Miner: Miner County.

NEWSPAPER PUBLICITY

That the Council be authorized to study, plan, and put into operation a system of newspaper publicity. Wisconsin is doing a splendid work, under the direction of the Wisconsin State Medical Society. Minnesota has adopted the Wisconsin plan, and has the same in operation. Wisconsin State Medical Society offers South Dakota this service at a nominal cost, twenty-five dollars per month.

GROUP PHYSICIANS' LIABILITY INSURANCE POLICY

The Council is referring the plan as outlined by the United States Fidelity and Guarantee Co. through their representative, Mr. D. D. Jenne. This plan will be submitted for your consideration.

WOMEN'S AUXILIARY

The Councilors should encourage the organization of a chapter of the Women's Auxiliary in their respective districts. Kingsbury County Society has a very active and efficient Auxiliary, meeting with the doctors at their Society sessions, and the doctor may forget the meeting but the ladies enjoy the social function and remind the doctor of his duty of his Society. Whetstone Valley District has adopted the same plan. It works well, is conducive to the best of fraternal feeling; you learn to know your fellow practitioner outside a professional atmosphere.

These local chapters will help materially the State Women's organization.

DENTAL AND PHARMACY ASSOCIATIONS

We should endeavor through the proper channels to bring about a full co-operation with the Dental and Pharmacy Associations, in directing public health programs for the state. The members of these associations are specialists in their lines and are in a position to assist materially in such programs. The dental profession, in conducting educational programs in dental hygiene. The pharmacist has a larger field.

The following advertisement taken from the *Sioux City Journal*, issue of December 5, 1927, reads:

Little Chats About Your Health
No. 50
Fake Radio Cancer "Cures"

Scientists in Paris have recently been experimenting with short wave radiation on a type of disease in plants known as "galls" which are in many ways similar to tumors in the human.

After a few days of such treatment the "galls" dropped off, leaving the plant as healthy as before being attached by the disease.

It is said that the Paris experiments have been utilized by charlatans, who have proclaimed a similar "cure" for cancer.

Cancer will probably eventually be conquered but when it is, your physician will have full and complete information regarding the proper ways and means.

Trust all health matters to your physician. Let us fill your prescriptions.

Toller Drug Co.
"Pharmacists"
600 Pierce St.,
Sioux City, Ia.

SPAFFORD SCHOLARSHIP IN VIRGIL

The Spafford Memorial Committee of the South Dakota State Medical Association, co-operating with President R. L. Slagle, have placed with the South Dakota Endowment Association one thousand dollars ($1,000.00), the income of this fund to be used for an annual scholarship in Virgil, in memory of Dr. F. A. Spafford. The State Medical Association, through this committee, contributed three hundred forty-nine dollars and seventy-nine cents ($349.79). President R. L. Slagle personally added $605.21 making a total of $1,000.00.

This fund is invested in a first mortgage on real estate, with an annual income of $60.00. At the graduating exercises held June 4, 1928, the establishment of this scholarship was formally announced by Dr. G. G. Cottam, of Sioux Falls, S. D., who was an intimate friend of Dr. Spafford.

Spafford Hall at the Northern Normal and Industrial School was recently dedicated in honor of Dr. Spafford, who had served some time on the board of regeants. I have been promised the material from the Normal which will appear in the *Journal of the A. M. A.*, the news editor having requested a photograph with description of the building, and such data as they may have.

POLITICAL ORGANIZATION

While it is true that the State Medical Association is not a political organization and does not greatly concern itself with politics, it is a fact that it does and must take a vital interest in the development of politics from the standpoint of the public health and welfare. If it does not do so, these interests will not be met. It is only through such activities that they have been met, if at all, in the past. It is certain that our Association enjoys the respect and confidence of a great majority of the members of the legislature. The medical man through personal contact with the legislator in his community is in a position to place before him proper information on pending legislation relative to public health.

The family physician oftimes may be able to present to the legislator constructive policies looking towards needed legislation for the better protection of the public health.

That component societies be requested to actively interest themselves in the selection of legislators, to the end that only those may be called to the legislature who believe in scientific medicine in contradistinction to cult and quack propaganda.

The officers and councilors have given support in all matters coming before the Association and have been helpful in the conduct of this office. The secretaries of the component societies have been responsive to all communications, and have been prompt in making their reports, as required by the by-laws. My observation leads me to believe that to a large degree the efficiency of the component society rests with its secretary, and his efficiency is reflected in the membership roster of his society. I would suggest, if he fails in his efficiency, elect him president of his district society.

I would recommend to the House of Delegates that the secretaries of the component societies be delegates to the State Association, or possibly a better plan would be the holding of a secretaries' conference during the annual session to discuss such matters as are of material interest to the profession.

This report closes the third year of my term as secretary. I wish to assure the officers and the House of Delegates of my appreciation of their full co-operation, and I wish to thank them for the privilege of serving this Association.

J. F. D. Cook, M.D.
Secretary-Treasurer
South Dakota State Medical Association

The following reports were referred to a Reference Committee consisting of Drs. P. D. Peabody, Chairman, N. J. Nessa and L. L. Park:

Hospital Committee; report of Dr. W. R. Ball as delegate to the American Medical Association, June, 1928; report of the Committee on Medical Education; a resolution from the Aberdeen District Medical Society; and the report of the Committee on Child Hygiene.

REPORT OF THE DELEGATE TO THE A. M. A., 1928 SESSION

To President Dr. S. M. Hohf and members of the South Dakota State Medical Association:

Herewith I report my attendance as your Delegate to the A. M. A. at Minneapolis, Minn., June 11 to 15, 1928, and observations in brief as to transactions of the A. M. A. House of Delegates:

The total membership of the House is 170. This number is on the basis of one delegate for each 750 members of the A. M. A. This was changed this year to 775. All State Medical Associations were represented except those of Florida, Nevada, Alaska, and Hawaii.

President Dr. Jabez N. Jackson reviewed vital changes affecting the practice of medicine and offered a recommendation to the effect that there should be an investigation and classification of medical charities, and classify them with rules as to what constitutes proper medical charity.

Official delegates from England, Canada, Australia, and Costa Rica Medical Societies were present. These fraternal delegates were Dr. Cheatle, London; Dr. Smith, Winnipeg; Dr. McPhee, Australia; and Dr. Chavarria, Costa Rica.

AMENDMENTS TO CONSTITUTION AND BY-LAWS

Section I—Article 5.

1. House of Delegates shall have power to expel a member of the A. M. A. on recommendation of the Judicial Council.

2. Section 5, Chapter II, shall read: Fifty voting members of the House shall constitute a quorum.

Resolutions were submitted at first meeting:

For the proper recognition of Dr. Noguchi, Dr. J. W. Lazear, Dr. James Carroll, and Drs. Adrian, Stokes, and Wm. Young, all martyrs of medicine in their contributions in the study of yellow fever.

To make Presidents of State Societies ex-officio members of House of Delegates.

To have dates of annual sessions so as not to conflict with commencement dates of medical schools.

Establishment of some provision for indigent and incapacitated physicians.

Communication from National Grange, a Society of 800,000, as to supply of rural physicians.

At the second meeting held on Tuesday, June 12, 137 delegates were present.

A report of the Reference Committee on Medical Education in part was as follows:

1. That it would be most desirable that medical students should graduate and enter practice at an earlier age than at present.

That the plan of covering the medical course in three years of four quarters each, instead of in four years of three quarters each with an interval of long vacation.

3. That the medical course is overcrowded with details and with detailed consideration of the specialties, and would be improved by a less crowded course confined more nearly to the essentials and to the fundamentals, and that efforts to this end should be made.

In the report of the Reference Committee on Hygiene and Public Health, the committee recommended the plan followed in the Mississippi River flood disaster be handled by the County Medical Societies, and that copies be on file with State Secretaries and County Secretaries, the same to be available to the public.

The letter from the National Grange was taken care of by the following resolution:

That an official reply to the Grange to be formulated by the Secretary of the House of Delegates:

1. That the House of Delegates is keenly alive to the problems involved, and recognizes that although there will always be some inadequacy of medical services in sparsely settled communities, improvement of medical services in rural districts is needed.

2. That the problem is being intensely studied by the Commission on Medical Education, the Committee on the Cost of Medical Care, the Council

on Medical Education and Hospitals, and other bodies.

3. That the problem is fundamentally economic and the solution involves much more than the mere length and costs of medical education.

4. That patience and time are necessary in order to obtain data and evolve methods of solving this problem.

5. That suggestions from the National Grange and information will be welcomed by the House of Delegates and by any of the bodies especially engaged in the study of medical education and economic problems.

In the report of the Reference Committee on Reports of Trustees and Secretaries the committee deprecated especially the compulsory multiple scientific meetings of hospital staff organizations as some have a tendency to interfere with the work of organized medical societies. There was a lengthy discussion of this phase.

As to the relief of needy physicians, the committee reported that each State Medical Association should be left free to decide this question for itself. At the third meeting it was recommended that the Board of Trustees appoint a committee of five to study the situation.

The committee approved of the work of the Council on Physical Therapy, Pharmacy and Chemistry, Medical Legislation, Scientific Research, Periodic Physical Examination, and Woman's Auxiliary.

Resolutions were adopted to have a committee whose duties shall be to deal with the problem of using moving pictures for educational purposes.

Continued legislation for the right to deduct from the income tax returns expenses incurred in attending scientific meetings and postgraduate courses was approved.

At the meeting the total registration was 156 delegates.

The election of officers resulted as follows:

For President, Dr. M. L. Harris, of Chicago, was elected over Dr. Wm. G. Morgan, of Washington, D. C.

For Vice-President, Dr. W. A. Jones, Minneapolis, was unanimously elected.

The following were unanimously re-elected:

Secretary, Dr. Olin West.
Treasurer, Dr. A. A. Hayden, Chicago.
Speaker, Dr. Fred C. Warnshius.
Vice-Speaker, Dr. Allen H. Bunce.
Trustees: Dr. J. H. Walsh and Dr. A. R. Mitchell.

President Dr. W. S. Thayer presented the following nominations:

Judicial Council, Dr. J. B. Herrick and Dr. F. W. Cregor.

Council on Medical Education and Hospital Vice, Dr. Bevan, Dr. R. Fitz, Boston.

Portland was selected for place of meeting for 1929 annual session.

The Minneapolis session had a total registration of 4,876, South Dakota having 114.

The entertainment was not overdone, and the auditorium is a wonderful building for such a meeting.

The diagnostic clinics on Monday and clinical lectures on Tuesday were well attended.

The scientific exhibit was the best ever seen in this country.

The A. M. A. had a membership on April 1, 1928, of 96,443. South Dakota has 382 members, or a little over half of the number of physicians in the State, which is 603.

The mailing list of the *Journal* on December 31, 1927, carried 93,887 names, or 3,575 more than in 1926.

The Spanish edition of the *Journal* had a total circulation in 1927 of 2,436, a loss of 109 as compared with 1926. The total net loss incurred in the publication of the Spanish edition in 1927 was $8,000. Half of this loss was borne by the Rockefellow Foundation.

Hygeia is to-day conspicuous in its field and is on a paying basis.

The A. M. A. Directory, 10th Edition, cost $150,648.65, or a net loss apparent as of December 31, 1927, of $1,079.82.

From 435 to 475 employees are engaged in carrying on the work of the A. M. A.

W. R. Ball, M.D.
Delegate

REPORT OF HOSPITAL COMMITTEE, 1928

Your committee reports 81 hospitals in the state, 10 Federal, 6 State, 1 County, 33 Individual, 18 Independent, 12 Church and 1 Industrial (Homestake). The following lists give names, location, year established, etc., of Federal, State and County hospitals.

The A. M. A. Hospital register for 1928 gives South Dakota 64 registered hospitals and 5 not registered. Other hospitals not admitted to the register will be found in a separate list.

Hospitals in the state which have been enlarged or rebuilt are: Sacred Heart, Yankton, additional building which provides for 50 more beds and new Obstetric, Physiotherapy and X-Ray Departments; St. John's Hospital, Rapid City, new building was formerly opened May 15, 1928 (cost $225,000), is modern in every respect and has a bed capacity of 80; St. Luke's, Aberdeen, this past month formally opened their new Hospital which is rated the best in the state, (125 beds).

Government owned hospitals in the state, 10: located as follows with number of beds, average patients, and year established:

Location Hospital	Beds	Av. Pts.	Est.
Canton, Asylum for Insane Indians	92	92	1898
Cheyenne, Agency Indian Hosp.	40	20	1915
Flandreau, Indian Hospital and School	27	11	1893
Fort Meade, Army Hospital	43	10	1875
Fort Thompson, Indian Hospital	24	12	1910
Hot Springs, Battle Mt. Sanatorium	544	419	1907
Pierre, Indian School (Federal)	30	10	1891
Pine Ridge, Indian Sch. (Federal)	20	8	1914
Rapid City, Indian Sch. (Federal)	20	15	1906
Rose Bud, Indian Sch. (Federal)	30	16	1915
Total	870	613	

South Dakota Hospitals listed in Hospital Register by A. M. A. as follows:

Hospital	Location	Standardized
Sprague Hospital	Huron	No
Dakota Deaconess	Brookings	No
Volga Hospital	Volga	No
St. Luke's Hospital	Aberdeen	Yes
Lincoln Hospital	Aberdeen	Yes
Chamberlain Sanitarium	Chamberlain	Yes
Bell Fourche Hospital	Belle Fourche	No
Pinard Hospital	Wagner	No
Platte Hospital	Platte	No
Wagner Hospital	Wagner	No
Vermillion Hospital	Vermillion	No
Bartron Hospital	Watertown	Yes
Luther Hospital	Watertown	Yes
Methodist Hospital	Mitchell	Yes
St. Joseph's Hospital	Mitchell	Yes
Bristol Hospital	Bristol	No
Peabody Hospital	Webster	Yes
Edgmont Hospital	Edgmont	No
Luther Sanitarium Hospital	Hot Springs	No
Our Lady of Lourdes Hosp.	Hot Springs	No
St. Bernard Hospital	Milbank	No
McWhorten & Wheelock Hosp. Hagen & Gregory	Miller	No
Camp Crook Hospital	Camp Crook	No
St. Mary's Hospital	Pierre	Yes
J. L. Waldner Hospital	Parkston	No
New Madison Hospital	Madison	Yes
Homestake Hospital	Lead	No
St. Joseph's Hospital	Deadwood	No
Canova Hospital	Canova	No
Sioux Valley Hospital	Sioux Falls	No
Lutheran House of Mercy	Sioux Falls	No
Moe Hospital	Sioux Falls	Yes
McKennan Hospital	Sioux Falls	Yes
De Vall Hospital	Garretson	No
Dell Rapids Hospital	Dell Rapids	No
Moody County Hospital	Flandreau	No
Methodist Deaconess Hosp.	Rapid City	Yes
Baldwin County Hospital	Redfield	No
Onida Hospital	Onida	No
Winner General Hospital	Winner	No
Mobridge Hospital	Mobridge	No.
Jacoby Hospital	Mobridge	No.
Sacred Heart Hospital	Yankton	Yes
St. John's Hospital	Rapid City	Yes

Location	State Hospital	Beds	Av. Pts.	Est.
Hot Spr'gs,	State Soldiers' Home	30	20	1889
Redfield,	Sch. for Feeble-minded	600	425	1901
Sanitor,	T. B. Sanitarium	240	182	1911
Sioux Falls,	State Sch. for Deaf	6	2	1880
Sioux Falls,	S. D. Penitentiary	8	4	1885
Yankton,	S. D. Hosp. for Insane	1430	1330	1879
Total		2315	1963	

Location	County Hospital	Beds	Av. Pts.	Est.
Faulkton,	Faulkton County Hosp.	15	6	1921

South Dakota Hospitals not listed in the A. M. A. Register:

Courshon Hospital	Winner
Samaritan Hospital	Huron
Newell Hospital	Newell
Swett Hospital	Wagner
Charles Mix Hospital	Geddes
Bury Hospital	Geddes
St. Catherine Hospital	Vermillion
Hawkins Hospital	Waubay
Corsica Hospital	Corsica
Bowdle Hospital	Bowdle
Selby Hospital	Selby
Gregory General Hospital	Gregory
Dallas Hospital	Dallas
Murdo Hospital	Murdo
Mellette County Red Cross Hosp.	White River
Lemmon Hospital	Lemmon
Wilmot Hospital	Wilmot

The report of the Council on Medical Education and Hospitals, A. M. A., at Minneapolis Meeting, indicated that the Council plans to devote considerable attention for the next several years to a survey of hospitals in the United States.

The Reference Committee called attention to the fact that the appraisal of medical institutions and agencies in so extensive and so populous a country as this is a vast undertaking and urged that the policy of the Council should be carried out with great caution and in co-operation with constituent State Medical Associations and State authorities. The Reference Committee strongly endorsed the recommendation of the Chairman of the Council on Medical Education and Hospitals urging that the practice of medicine is not the proper function of corporations, and that the A. M. A. should use its utmost endeavor to stop this growing abuse.

W. R. Ball, M.D.
Chairman

REPORT OF THE COMMITTEE ON MEDICAL EDUCATION

It has been impossible for the Committee on Medical Education to have a meeting, on account of long distances, but Dr. Ohlmacher and myself talked things over last May. We are unable to formulate any plan that seems at all practicable.

Our state is so large and the doctors live so far apart that it seems impracticable to plan any definite postgraduate work.

Clinics for one day might be put on at the various hospitals. Small groups might profitably plan courses of study, but as far as one can see it would be impossible for the State Association to work out any plan for the whole state.

I am enclosing a memorandum sent us from the A. M. A. and suggest that this matter be presented to the House of Delegates and Board of Councilors and perhaps some one can think of a practical working basis.

C. E. McCauley, M.D.
Chairman

Supplement to the Report of the Committee on Medical Education

In Ohio the work is varied: (1) The State Association has been working for several years in conjunction with the county units in arranging lectures on subjects of general interest to physicians, and in stimulating interest in periodic health examinations. (2) Many of the district societies have for some time provided a series of postgraduate medical lectures by promient speakers from the various states or from abroad. Such programs have generally extended over one week and have provided not only lectures but also demonstrations, group meetings, and round table discussions. They have been well attended, and in spite of their attractive progress the expenses have not usually exceeded $10.00 for each physician in attendance. This sum was provided by means of a registration fee. (3) In some of the large hospitals clinic days have been more or less regularly scheduled, the programs being worked by the medical society or medical school and supervised by the hospital staff. (4) The medical schools of the state at the request of the committee on medical education are now planning review courses for physicians in practice. (5) The president of the State Association has also suggested a plan for traveling clinics; this plan is now under consideration.

In Minnesota four types of work are carried on, partly through the University Medical School and its Extension Division, and partly through the state and county medical societies. (1) The postgraduate school has a large enrollment of men taking one, two, or three year courses in the specialties. (2) The teaching staff of the medical school is giving intensive three-day courses (8:00 A. M. to 10:00 P. M.) at the school. (3) The medical school, its Extension Division, and the Hennepin and Ramsey County Medical Societies are co-operating in an extension course covering one evening each week for from ten to seventeen weeks; this course is given in Minneapolis and the physicians in several counties are taking advantage of it. (4) Men from the teaching staff of the medical school and other men of ability chosen by the county societies themselves are putting on courses extending through an afternoon and evening weekly for from eight to twelve weeks. Such a course has been conducted in a number of the counties, two instructors having charge of each of the weekly meetings, and the attendance has ranged from fifteen to forty physicians. Such an attendance has made the meetings inexpensive, the groups in attendance defraying the expenses of the instructors with the addition of a small overhead necessary to the arranging of the course. Financially, all work has been planned only to pay expenses and in no case has the expense been excessive.

REPORT OF THE COMMITTEE ON CLINICAL HYGIENE

Realizing that the work of this committee as such is very limited, but that the State Division has had a very heavy year, the Committee on Child Hygiene desire to submit to the State Association the following report:

Because of very limited finances the personnel of the State Society has been reduced from a director, three field nurses, part-time lecturer, part-time epidemiologist, secretary, and part-time stenographer, to a director and a stenographer, the latter being furnished by the State Board of Health. This is indeed a very deplorable reduction to make in such important work. Florence E. Walker, R.N., present director, is to be congratulated on the amount of work done throughout the state on such limited finances.

Below is given an idea of the work carried on:

Summer conferences	49
Prenatal clinics	18
Preschool children examined	1,476
3 series of mothers' classes	Enrolled 258
5 classes of girls (high school and college)	Enrolled 194

Inspection of 63 of the 98 licensed maternity homes and hospitals.

A survey was made of the infantile paralysis situation, resulting in 410 replies from 558 letters: 91 cases reported 13 deaths, 26 cripples. So far only one child is under treatment because of limited finances, but it is hoped more may be done with this year's appropriation.

Hundreds of prenatal letters, pieces of literature, and mothers' books were sent out on request.

At the State Fair, September, 1927, the usual examination of boys and girls in the farm clubs was made. Also a baby clinic was held, at which 131 were examined. All of the above was handled by the physicians and dentists of the state. Their splendid co-operation always makes this activity a very popular one.

Throughout the state generally May Day was observed by the examination of preschool children. In four towns alone over 530 children were examined.

A request was made of each member of the committee for suggestions. The following are some of the ideas expressed:

Federal aid will be withdrawn in 1929 and unless the State appropriates substantially the work of this division will cease. It would be a calamity if this state would neglect this most important work. It cannot afford to neglect to utilize the foundation already laid down in maternal and infancy work. Let us all get together and secure an adequate working fund.

Possibly if finances are limited and inadequate to hire a full-time M. D. director, instead of going out of the state, we should use our own men who are interested along these lines to conduct the clinics, certainly we ought to be able to take care of our own along this line as well as other lines of practice.

Finally, to those men who are interested in this subject, we should say avail yourselves at every opportunity to talk to women's clubs, etc., thus getting the child welfare idea before the public directly.

W. H. SAXTON (Chairman) Huron, S. D.
E. N. PITTINGER, Aberdeen, S. D.
WM. E. DONOHOE, Sioux Falls, S. D.

RESOLUTION BY THE ABERDEEN DISTRICT MEDICAL ASSOCIATION

To the Officers, Councilors and House of Delegates of the South Dakota State Medical Association, greetings:

The Aberdeen District Medical Society ask that the State Association authorize the President and Secretary to employ a competent attorney to whom the various problems of the State Association may be submitted for expert opinion, advice and proper formulation of such constructive legislation as the Association may from time to time deem advisable.

That the Aberdeen District Society favor the presentation of a Basic Science Bill as a major program for the coming session of our legislature.

That the state per capita dues be made $10 so that the State Association may be in a position to employ such legal advisors.

Aberdeen District Medical Society,
R. G. Mayer, M.D.,
Secretary.

REPORT OF THE COMMITTEE ON LEGISLATION AND PUBLIC POLICY

The president appointed a committee of fifteen on legislation and public policy. Inquiry by letter brought a response from seven members favoring a basic science law patterned after the draft by Wm. C. Woodward and arranged according to our needs.

In a special meeting of the council at Huron there was a uniform expression in favor of a basic science law.

In view of these facts the committee recommends:

1. That a draft of a basic science law be placed before the 1929 South Dakota legislature.
2. That the proposed bill for a basic science law be patterned after the Woodward draft, embodying the requirements in anatomy, physiology, chemistry, bacteriology, pathology, physical diagnosis, and hygiene.
3. That the 1929 committee shall consult legal talent in order to insure a properly executed document for proposal to the legislature.
4. That the 1928 committee be discharged after making this report.

J. P. Isaac, M.D., Chairman.

REPORT OF THE COMMITTEE ON PUBLICITY

We, your Committee on Medical Publicity, recommend that the South Dakota State Medical Association adopt the use of the system of publicity and education which has been instituted and now in use by the states of Wisconsin and Minnesota, at the earliest date that funds for that purpose may be available.

H. R. Kenaston, M.D.
H. W. Sherwood, M. D.
J. P. Isaac, M.D.
Committee

REPORT OF THE COMMITTEE ON NECROLOGY

It is with the most sincere regret and sorrow that we report the largest number of vacant places within our ranks in the history of the Association. Fourteen of our co-laborers have answered the final summons since our annual meeting in 1927.

Dr. Joseph Howard Smith, Huron, South Dakota, Hahnemann College of Medicine, Chicago, 1868. Practiced in Michigan twelve years. Moved to South Dakota in 1882 and located at Groton and was in active practice at that place until 1898 when he moved to Huron. A past president of the Homeopathic society of South Dakota. Served on the State Board of Health and Medical Examiners for a number of years. The oldest Homeopathic physician in the point of years of practice in South Dakota, having served continuously for thirty-five years. Dr. Smith enlisted in the Civil War at the age of eighteen; honorably discharged in 1865. Died May 20, 1927, at Battle Mountain Sanitarium, aged 84.

Dr. Richard R. Jones, Britton, South Dakota, Rush Medical College, 1888; member of Aberdeen Medical Society No. 1; practiced in South Dakota more than one-third of a century. Highly respected by physicians and the citizens of the community. Died June 26, 1927, aged 65.

Dr. Donald D. Raber, Lead, South Dakota, Creighton Medical College, 1896; member of Black Hills District Medical Society No. 9; practiced in Tilden and Omaha, Neb.; on staff of Homestake mine for two years prior to his death. Died July 21, 1927, aged 49.

Dr. Walter M. Quinn, Winner, South Dakota, Creighton Medical College, 1905; member of Rosebud Medical Society No 10; practiced at Zeland, N. D., and at Bonesteel, S. D.; later moved to Winner. Died July 20, 1927, aged 49.

Dr. George F. Pugh, Florence, South Dakota, University of Nebraska, 1898. Drowned August 7, 1927, aged 66.

Dr. James B. Dickey, Iroquois, South Dakota, Homeopathic Medical College of Missouri, 1883; member of Kingsbury Medical Society No. 11. Died December 31, 1927, aged 71.

Dr. Arthur J. Doty, Colman, South Dakota, University of Illinois, 1892. Came to South Dakota in 1897, was located in Colman over thirty years. Died of pneumonia, March 29, 1928, aged 63.

Dr. N. B. Gearhart, Huron, South Dakota, Drake University of Des Moines, 1885. Came to South Dakota in 1902; member of Huron District Medical Society No. 5. After his graduation he practiced in Texas, Iowa, and Pierre, S. D. Practiced in Huron three years preceding his death. Died March 14, 1928, of diabetes, aged 63.

Dr. John Edward Schwendener, Bryant, South Dakota, Rush Medical College, 1902; member of Watertown District Medical Society No. 2; came to Bryant in 1905 and was in active practice the entire time until his death which occurred at a farm home where he was visiting a patient. He was coroner and Superintendent of Hamlin County Board of Health for many years; was active in financial, fraternal, civic, and religious circles. Served in the World War at Camp Dodge. Died March 28, 1928, of cerebral hemorrhage; aged 52.

Dr. R. C. Warne, Mitchell, South Dakota, Rush Medical College, 1887; Spanish War Veteran; city health officer for many years. Died April 12, 1928, aged 64.

Dr. William Gardner Smith, Lodgepole, South Dakota, Columbia University, 1884. Came to South Dakota in 1887; founded Sturgis Hospital at Sturgis, S. D.; member of South Dakota Railroad Commission from 1889 to 1910; President of the South Dakota State Medical Association, 1912. In 1910 he retired to a homestead in Perkins County. He was born at Northfield, Maine, and died at his ranch home, May 5, 1928; aged 75.

Dr. Simon W. Smith, Watertown, South Dakota, University Edinburg, Scotland; member of Watertown District Medical Society; practiced in New York City and in Minnesota; licensed in South Dakota, 1906; member of the staff of the Bartron Hospital for a number of years prior to his death. Born in Vermont, 1857, died April 21, 1928, of organic lesion of the heart, aged 71.

Dr. Martin M. Grove, Dell Rapids, South Dakota, University of Illinois, 1905; member of Sioux Falls Medical Society No. 7; came to South Dakota the year of graduation and located at Dell Rapids and had been in continuous practice until his passing; surgeon in the Dell Rapids Hospital. Died June, 1928, aged 49.

Dr. Ralph W. Minard, Midland, South Dakota, Tufts Medical College of Boston, 1898; member of Pierre Medical Society No. 4; practiced in Iowa five years; came to Midland, S. D., 1907, and labored faithfully until May, 1928. Born in Nova Scotia. Died of cerebral hemorrhage, at St. Mary's Hospital, July 9, 1928, aged 59.

J. B. Vaughn, M.D.
Chairman

Dr. A. G. Allen, of Hot Springs, made an informal report for the Committee on Arrangements.

The Secretary presented a report of the Regional Meeting of the Minnesota-Wisconsin-North and South Dakota Associations, held at St. Paul, at which the subject of publicity was considered. The Secretary outlined the publicity plan and moved that a committee be appointed to study the plan and report to the Wednesday meeting of the House of Delegates. The motion was seconded and carried, and the President appointed the following committee:

H. R. Kenaston, M.D.
H. W. Sherwood, M.D.
J. P. Isaac, M.D.

The Secretary read a letter from the Minneapolis office of the United States Fidelity and Guaranty Company setting forth a group insurance plan, and also read opinions of attorneys McFall and Bailey on the subject. Mr. D. D. Jenny, Field Representative of the United States Fidelity and Guaranty Company, presented the details of the plan and answered questions. Mr. Jenny also read a letter to Dr. Cook concerning the working of the plan with respect to clinics.

A motion by Dr. E. M. Young to the effect that this group insurance be endorsed and recommended to the members of the Association was regularly seconded and carried.

The Secretary read the report of the Committee on Legislation and Public Policy, which, on motion of Dr. Sherwood, was adopted and the committee discharged.

The discussion of a basic science law was postponed to the next meeting.

The President appointed the following Nominating Committee to present nominations and to consider the place of the next meeting:

First District, C. J. Lavery, M.D., Chairman
Second District, J. B. Vaughn, M.D.
Third District, E. E. Torwick, M.D.
Fourth District, B. M. Hart, M.D.
Fifth District, L. N. Grosvenor, M.D.
Sixth District, E. M. Young, M.D.
Seventh District, N. J. Nessa, M.D.
Eighth District, J. C. Ohlmacher, M.D.
Ninth District, A. G. Allen, M.D.
Tenth District, H. R. Kenaston, M.D.
Eleventh District, A. E. Bostrom, M.D.
Twelfth District, H. G. Harris, M. D.
Thirteenth District, G. E. Burman, M.D.

The Secretary read an invitation to hold the next meeting at Mitchell, S. D., which was referred to the Nominating Committee.

The meeting adjourned at 4:45 p. m.

Second Meeting—Wednesday Morning.

August 8, 1928

The meeting of the House of Delegates was called to order at 7:35 a. m., Wednesday morning, August 8, 1928, by President Hohf.

DELEGATES

C. J. Lavery, M.D.
W. A. Bates, M.D.
J. B. Vaughn, M.D.
B. M. Hart, M.D.
L. N. Grosvenor, M.D.
E. M. Young, M.D.
N. J. Nessa, M.D.
J. C. Ohlmacher, M.D.
H. R. Kenaston, M.D.
A. E. Bostrom, M.D.
H. G. Harris, M.D.
G. E. Burman, M.D.

COUNCILORS

R. D. Alway, M.D.
H. W. Sherwood, M.D.
L. N. Grosvenor, M.D. (acting for the Fifth District)
J. P. Isaac, M.D.
H. R. Kenaston, M.D.
A. E. Bostrom, M.D.
G. E. Burman, M.D.

OFFICERS

S. M. Hohf, M.D., President
N. K. Hopkins, M.D.
L. N. Grosvenor, M.D.
J. F. D. Cook, M.D.

The Secretary read the minutes of the previous session, which were adopted on motion duly seconded and carried.

The report of the Publicity Committee was read by Dr. Kenaston and adopted on motion of Dr. Lavery.

Dr. N. J. Nessa, for the Reference Committee on Reports of Committees and Officers, stated that the committee reported favorably on the material submitted to it, namely, the report of the Hospital Committee, the report of Dr. Ball as delegate to the American Medical Association, the report of the Committee on Medical Education, a resolution from the Aberdeen District Society, and a report of the Committee on Child Hygiene.

A motion was made by Dr. Bostrom, and seconded, that the report be adopted and the committee be discharged.

An amendment to the Aberdeen Resolution to change the dues to eight dollars instead of ten dollars was presented by Dr. Isaac and seconded. The amendment was lost by a vote of five in favor and ten against, and the original motion to adopt the report of the Reference Committee was carried.

Upon motion of Dr. E. M. Young, Dr. T. B. Smiley was seated as delegate from the Sixth District.

The report of the Committee on Constitution and By-Laws was presented by Dr. Alway, who stated that the Committee reported favorably on the proposed constitution and by-laws. A motion was made by Dr. Lavery, duly seconded and carried, that the report be adopted and the committee be discharged. In the discussion it was considered advisable to include in the by-laws a provision for associate membership, which would admit Federal employees to membership in the Association. It was the consensus of opinion that this matter should be presented at the next annual meeting.

The subject of the basic science law, laid over from the previous session, was introduced for discussion. It was voted, on motion of Dr. Young, that the Association recommend that the Board of Examiners of five shall be constituted of men appointed by the Governor, who are, in their respective fields, heads of departments in the secondary schools.

The Secretary read a telegram from Mr. Klein and Dr. Jones, of Minneapolis, regretting their inability to be present.

Dr. Lavery presented the following as the report of the Nominating Committee:

President:
N. K. Hopkins, M.D., Arlington
First Vice-President:
L. N. Grosvenor, M.D., Huron
Second Vice-President:
Percy D. Peabody, M.D., Webster
Third Vice President:
W. A. Bates, M.D., Aberdeen
Secretary-Treasurer (for three years):
J. F. D. Cook, M.D., Langford
Delegate to A. M. A.:
T. F. Riggs, M.D., Pierre
Alternate to A. M. A.:
S. M. Hohf, M.D., Yankton

COUNCILORS

Tenth District:
H. R. Kenaston, M. D., Bonesteel
Eleventh District:
A. E. Bostrom, M.D., DeSmet
Twelfth District:
Charles Flett, M.D., Milbank
Place of next meeting (1929):
Mitchell, S. D.

A motion was made by Dr. Sherwood, seconded and carried, to adopt the report. Upon motion of Dr. Lavery, the President cast the unanimous ballot of the House for the nominees named in the report.

The meeting adjourned at 8:40 A. M., to reconvene at the call of the President.

PROCEEDINGS OF THE BOARD OF COUNCILORS

FIRST MEETING—TUESDAY, April 7, 1928

The first meeting of the Board of Councilors of the South Dakota State Medical Association, at the Forty-seventh Annual Session, was called to order at the Battle Mountain Sanitarium, Hot Springs, at 8:20 P. M., Tuesday, August 7, 1928, by the Chairman of the Board, Dr. Frederick Treon, of Chamberlain.

There were present:

OFFICERS

President S. M. Hohf, M.D.
Vice-President N. K. Hopkins, M.D.
Second Vice-President, L. N. Grosvenor, M.D.
Secretary J. F. D. Cook, M.D.

COUNCILORS

First District, R. D. Alway, M.D.
Second District, H. W. Sherwood, M.D.
Fourth District, A. A. McLaurin, M.D.
Fifth District, L. N. Grosvenor, M.D.
Sixth District, Frederick Treon, M.D.
Seventh District, R. W. Mullen, M.D.
Eighth District, J. P. Isaac, M.D.
Tenth District, H. R. Kenaston, M.D.

Eleventh District, A. E. Bostrom, M.D.
Twelfth District, Chas. Flett, M.D.
Thirteenth District, G. E. Burman, M.D.

The report of the Treasurer, presented by Dr. Cook, was referred to a Finance Committee on motion of Dr. Alway. The Chairman appointed as the Finance Committee Drs. Alway, Mullen and Hopkins.

President Hohf suggested that the Committee on Revision of By-Laws provide a clause by which physicians in the Federal Service might be made eligible to membership in the South Dakota State Medical Association.

The Secretary presented a bill from Clark and Henderson, attorneys, for investigation and drafting of the Basic Science Law, two hundred and fifty dollars, and a bill from the Evans Hotel for the honorary banquet to the officers and past presidents, thirty-four dollars. On motion of Dr. Alway it was voted to allow the bills.

The publicity plan of the Wisconsin State Medical Association was presented, discussed, and a motion made by Dr. Mullen that the Council recommend to the House of Delegates the adoption of this plan of publicity. The motion was seconded and carried by a vote of eight for to four against.

The meeting adjourned at 9:30 P. M., to meet at the call of the Chair.

PROCEEDINGS OF THE SCIENTIFIC SESSIONS

First Day—Wednesday Morning,

August 8, 1928

The first meeting of the Forty-seventh Annual Session of the South Dakota State Medical Association, held at the Battle Mountain Sanitarium, Hot Springs, South Dakota, August 7-9, 1928, was called to order at nine o'clock by President Dr. S. M. Hohf, Yankton, South Daktoa.

Announcement were made by Dr. A. G. Allen, Chairman of the local committee.

President Hohf: The first number of the program was a symposium on Physical Therapy given by the Battle Mountain Sanitarium group. Colonel Edward R. Lindner, Governor and Surgeon, was the first speaker.

Colonel Lindner's paper was followed by one by Lieutenant Charles M. Griswold of the Sanitarium; and the symposium was closed by a paper by Dr. H. J. Holmquist, executive secretary of the Council on Physical Therapy and Chemistry of the A. M. A., Chicago.

First Day—Afternoon Session

The second Scientific Session was called to order by First Vice-president Dr. H. N. Hopkins, when President Hohf read his presidential address. This was followed by a symposium on tuberculosis, opened with papers by Dr. R. E. Woodworth, Superintendent of the State Tuberculosis Sanitarium at Senator; and Captain Joseph C. Hynes, also of the Sanitarium.

As Dr. O. R. Wright, of Huron, was ill and unable to be present his paper in the symposium was not presented. At this point Dr. Cottam was called upon to make a statement concerning the Spafford Memorial Fund as follows:

Dr. Cottam: I have been asked to make a financial report on the Spafford Memorial Fund. I will make it very brief indeed. You will recall, perhaps, that at the Sioux Falls meeting of this organization I made a report of the money I had collected and paid out. The total amount subscribed was $620.00, and of that $300 was paid for the portrait which now hangs in the State Capitol at Pierre, a replica of which was given to Mrs. Spafford. That was at a cost of $300.00. There was a cost of about $27.00 or $28.00 for stationery, stenographic work and that sort of thing. I turned over to the House of Delegates in 1925 a sum of money of a little over $300.00. That accumulated some interest so that it amounted to the sum of $349.79.

I had been somewhat at a loss to know what to do with that money so as to complete the Memorial. The Committee discussed the wisdom of putting up a very fine bronze plate in one of the buildings at Vermillion, for, as you know, Dr. Spafford was very keenly interested in the State University, lectured there for years on medical jurisprudence and, when on the Board of Regeants, he had the oversight of that institution and took a very close personal interest in it. But it seemed such a cold-blooded way of carrying on the memory of a man like Dr. Spafford, and I hesitated to do it. One day President Slagle happened to come into my office and I told him about having that money on hand and that I was about to turn it over to the State society. He immediately said he would like to have the privilege in due time of adding to that fund enough to bring it up to the amount of $1,000.00 and establish a scholarship in Latin at the State University. He had already given $100.00 toward the original fund. I turned over the money with that recommendation and made a verbal report. This year Dr. Slagle wrote to me that he would be very glad if I would come down to Vermillion at the time of commencement exercises in June and announce that the scholarship was now available. I appeared on the program there and made that announcement.

You all know Dr. Slagle. He is a man of characteristic modesty. He didn't care, I am quite sure, to have his part in it mentioned, but I thought in justice to the man and for the information of everybody concerned, everyone should know about it, as I want you to know about it now.

Dr. Slagle added to that sum of $349.79 the sum of $650.21, making a total of $1,000.00, which is invested in first-class securities yielding six per cent, so that the honor student in Latin each year will receive $60.00. It is named the Frederick Angier Spafford Latin Memorial Scholarship. It really should be the Slagle-Medical Society-Spafford Memorial, but Dr. Slagle would not consent to his name being used.

That is the situation and that is the way the matter has been disposed of. To me it is a most happy solution. It will keep Dr. Spafford's memory alive in this state in perpetuity. This money will be reinvested from time to time and the amount of approximately $60.00 each year will be available.

President Hohf: The Secretary informs me that the only transaction we have to consider now is a resolution passed with reference to insurance to be brought up at this time.

Secretary Cook: The proposition of Physicians Liability Insurance, sponsored by the State Medical Association, has been under consideration for a number of years and, at a special session of the Council, Mr. D. D. Jenny, Field Representative of the United States Fidelity & Guaranty Company, made a most splendid proposition on the part of his Company to the physicians of the state. The Council recommended and the House of Delegates took action to refer it to the general session to-day for your sanction or for the expression of your wishes in the matter. We will call on Mr. Jenny at this time to present the plan.

Mr. Jenny read the letter of the United States Fidelity & Guaranty Company setting forth the insurance plan.

LETTER OF THE UNITED STATES FIDELITY AND GUARANTY COMPANY

Minneapolis, Minn., July 17, 1928.

Dr. J. F. D. Cook, Secretary-Treasurer,
South Dakota State Medical Society.

We are pleased to submit for your consideration the following proposition in connection with furnishing group physicians' liability insurance to the members of the Society and are filing this material with the officers and councilors of the Society, as per the suggestion of the Executive Committee at Huron at their March meeting, for final action at the Hot Springs convention:

First, with respect to coverage: It was suggested by the Executive Committee that the matter of whether our policy protected the doctor in the event of suit alleging mutilation or assault while operating in emergencies beyond the consent of the patient, be cleared up. In answer to this question, we are attaching not only copy of opinion of the company's general counsel at Baltimore with respect to the breadth of our policy, but we are also attaching copy of letter of Mr. T. M. Bailey of Bailey & Voorhees, at Sioux Falls, S. D., the attorney who pointed out the physician's liability in this respect, which should clear up this question satisfactorily.

Attached is also a copy of the certificate issued to the individual doctor who comes into this group policy, on the reverse side of which is an exact copy of the master policy deposited with the trustee for the Society, who is usually the Secretary. We are pleased to call attention to the fact that this coverage has been considerably broadened over the present South Dakota individual form; that while the present form covers loss arising in consequence of malpractice, error or mistake, the new group form which we are offering covers in addition suits based upon autopsies, inquests, personal restraint, the dispensing of drugs or medicine, or arising from any counter-claims in suits brought by an assured for the collection of fees, provided such damages are claimed under Paragraph A, B, or C.

The present individual form costs the doctor $30.00 for $5,000 to $15,000 limits. As an inducement to insure the entire group, we are making a rate of $25.00 per physician for $10,000 to $30,000 limits on the broader form, which is $15.00 cheaper than the present individual policy would be with $10,000 to $30,000 limits, such policy individually costing at present $40.00. This offer is based upon the provision that ultimately fifty per cent (50%) of the members of the Society will come into our group plan and we will start this policy upon the request of fifty or more of the members.

We will cancel and rewrite on a pro rata basis such existing individual policies which we now carry for any members, substituting the broader form at the rate quoted. We will also pay the local agent who now writes the individual policy for the doctor the commission on same on the new basis, to remove any embarrassment on the part of the doctor in transferring this policy to the group. This does not apply, however, to a policy carried by a doctor in another company through our agents throughout the state. On account of the reduced rate, our commission to the local agent in these cases will be smaller than he is now receiving, for obvious reasons.

Our policy contains no clause requiring free expert testimony on the part of the members, which has been construed to give the insurance companies a monopoly on expert testimony for the defendant.

This group policy has proven popular throughout the United States and we are writing a considerable number of such State societies throughout the country.

Yours very truly,
Wm. H. Gibbons, Manager,
By D. D. Jenne,
Field Supervisor.

Dr. Cottam: I should like to ask how many individuals you would have to have to constitute a group.

Mr. Jenny: We will start the policy with fifty. That is, at the request of fifty or more members with the assurance that ultimately we will be able to have at least fifty per cent of the association. This is a wholesale rate. The commission is cut in two so that all the water is squeezed out of it. Inasmuch as we already have around fifty-five individual doctors, we can, of course. immediately convert those to this new form, which at the present time will be a loss to us because we are getting $40.00 for this same proposition individually. We will get $25.00 for it on this basis, giving double coverage for $5.00 less. We are also cutting out the charge of fifty per cent extra for assistants.

I believe Dr. Cook has prepared some sort of memorandum for the Councilors which is an expression of their willingness to join this policy eventually. I suppose that means some endorsement or sponsoring by the local Councilors. We can give a good deal of this information by mail. We do not expect to do it all in the first year. If within a year or two we do not get the response, I suppose we can withdraw, since we have taken the initiative. I think it is a very excellent opportunity to get solid protection in the matter of liability cases in dealing with the public.

In all lines of liability in dealing with the public, it is very important to have a company on the map and doing business fifteen or twenty years from to-day. In the case of a minor in an automobile accident, a settlement may be made with the parents and a guardian appointed, and when the child attains majority, if there is any condition which could be alleged to have arisen out of the injury, even though it may be ten or fifteen years from now, the child can open up the suit and recover. If your company is not on the map at that time, it comes back to you. That is in automobile insurance. I referred to that because we are dealing with the public in long drawn out liabilities.

Dr. Isaac: In order to facilitate matters and bring this proposition before the Assembly, I move that the Assembly approve the resolution passed by the House of Delegates with respect to the United States Fidelity & Guaranty insurance proposition.

The motion was seconded and carried.

The meeting adjourned at four-twenty o'clock.

Third Scientific Session—Wednesday

Evening, August 8, 1928

The third scientific session was called to order at eight o'clock by Dr. A. G. Allen of Hot Springs.

Chairman Allen: We are especially interested to have the Black Hills District Medical Society and the Battle Mountain Sanitarium as the hosts of the State Medical Society. It has been eighteen years since the Association has come to the Black Hills. Eighteen years ago it met at Hot Springs.

Though the weather has been a trifle warm, we rather feel that we have been putting our best forward in the fact that we have given you dry roads to come over to Hot Springs, and in addition have been able to give you a program of entertainment that I think has pleased the members.

Our first speaker this evening will be our chief host, Colonel Lindner. (Applause.)

Colonel E. R. Lindner: This is my third appearance and no doubt I am becoming a nuisance. I am very glad you are all here. We are mighty pleased that we have been able to entertain you.

Over in the Hawaiian Islands the Hawaiians are very sentimental and their sentiments are expressed in the word "Aloha." I want to extend that sentiment to you, "Aloha" both coming and going. We have enjoyed you and you have been a great uplift to us. I am sure the members of the Battle Mountain Sanitarium will cherish this for a long time to come. We are happy to have you with us, and we want to express in that one word "Aloha" all that we feel.

Over in Honolulu during the war, the battleship New York was pulling out of harbor with a load of troops bound for France. A little Hiwaiian man, I expect eighty or ninety years old, when the ship pulled out started to holla, "Aloha! Aloha! Hurrah for George Washington! Hurrah for Abraham Lincoln! Hurrah for Jesus Christ! Aloha! Aloha" That word embodied all that he had to offer.

I extend to you greetings. You have so many other prominent speakers here this evening that I will make way for them. (Applause.)

Chairman Allen: We also have with us

our old reliable Mr. Martin, who will say a few words to us.

HONORABLE E. W. MARTIN: Mr. President, Visiting Physicians, and Friends: I am assigned an address of welcome. If you have not already discovered that you are welcome in Hot Springs and within the environs of this institution, anything that I might say at this late hour would hardly convince you of it. You are indeed very welcome.

It is extremely appropriate, I think, that the State Association of Physicians and Surgeons of South Dakota should meet at Hot Springs. This is the health resort, not only of the Black Hills of this state, but of a considerable area of Nebraska and Wyoming. These institutions of which we have been the guests in the last two days are attracted here because of the many advantages of health and purity of conditions.

The profession of the doctor as well as the profession of the lawyer exists at all because of the infirmities of mankind, physical and mental. That is nothing against either. The greatest Teacher and the greatest Physician the world has ever known came to minister to mankind, and as long as mankind has mental and physical infirmities there will be need for the medical profession.

I think you need have no alarm for the idea that the period and usefulness of your profession is soon to come to a close. If we correctly interpret the signs of this twentieth century civilization the millennium is still quite a distance in the future. The wonderful progress that has been made in the science of medicine and surgery during the last few generations is cause for congratulation.

The law is always looking backward, in a way; we are looking for precedent in the law. The medical profession always has its face to the front, looking for new problems, new methods, new accomplishments and achievements of science.

This variation between the view of one profession and the other arises in a way not at all critical of either. The law has been from the foundation of the world. Indeed, the Ten Commandments upon the tablets, any correct statement of right and wrong and the obligations and duties of mankind, must necessarily go as far back as the human race itself, so the progress of the law is always dependent upon finding the way to apply the old principles to new and changing conditions. The medical profession, on the other hand, is not so organized; it is constantly looking for the aids of science, and science has done wonders in aid of the medical profession, as we all know, in recent years.

We live in a scientific age. I doubt very much whether outside of the development of modern industry, which has received so much impetus and achievement from science, there is any other field of human endeavor that has been so aided and whose progress has been so dependent upon and so assisted by science as the medical profession. The wonders of the *x*-ray, of radium, of ether, of all the attending helps that make it possible to relieve human infirmities, have received such wonderful help from science.

You have a speaker of the evening, but I want to assure you that Hot Springs appreciates your coming here. Our slogan is, "You'll like Hot Springs."

We who live here live here because we like it. Most of us could get out of town and leave if we wanted to. We are not held here by compulsion, but by these beautiful surrounding hills, these health giving waters, the charming climate, the mountain ranges with their balsam and pines, and the inspiration of the mountain heights. All those things we feel in a measure belong to us. We love them and we hope you will like Hot Springs well enough to come back again. Indeed, I think it would be quite in order for the Medical Association to fix upon this place as a place to meet once a year and get close to the beauty of the world that can be found tributary to Hot Springs.

To-morrow morning you will take a trip through the mountain ranges. For magnificent beauty these mountain ranges are unsurpassed anywhere on this continent. Those of you who have not yet seen these remarkable appearances of nature will by to-morrow night realize that I have not overestimated.

Come again, and may you enjoy the hills and Hot Springs sufficiently to take away very pleasant memories. (Applause.)

CHAIRMAN ALLEN: I now have the pleasure of introducing the President of the State Medical Association, Dr. Hohf, of Yankton. (Applause.)

PRESIDENT HOHF: First let me get this out of my system: I would rather have the hands of these little children than all the rest of you put together. I like the little folks. There is nothing more beautiful on earth than a little girl.

Members of the Black Hills District Medical Society, Mr. Martin, Dr. Dodson, and Friends: I consider it a privilege and a great honor to stand before you representing the grandest, most glorious, the noblest profession on God's green footstool. Congressman Martin has spoken of the profession. Yes, it is a great profession, but it is not as great as the first Physician, whom we represent in a way.

The infimities of the people are with us. We do not enjoy seeing people ill. There is no man in medicine who enjoys the illness of others. All he enjoys, since they are afflicted, is that he may give them his share in the attempt to afford relief. That is the attitude, of course, of the honest physician—the opportunity to demonstrate the ability to relieve suffering humanity. I repeat that he does not rejoice when he confronts illness, not at all.

Eighteen years ago last May we had the pleasure of meeting here in Hot Springs. I often wonder why it is called *Hot* Springs.

Bless your hearts, we know now. It has been hot! It is well named. But in spite of that, folks, be assured that the Association has enjoyed its return to your beautiful city.

In all these years that have elapsed, I believe I have attended every annual session, and I do not recall a single session that stands out as vividly and clearly in my mind as the meeting eighteen years ago.

Now, Colonel, that is not soft soap; it is a fact. I remember distinctly, clearly, our meeting eighteen years ago, and those of you who were there then well remember the drawing card, Dr. J. B. Murphy.

To-day as I sat listening to the papers, I thought of J. B. Murphy, and I wonder if his spirit is in our midst. At any rate the personality of J. B. Murphy is here, the personality of that man of medicine, than whom there has never arisen a greater one in America. His personality I value and appreciate and sense, and it is my hope there are many of the Association of this state who have absorbed sufficient of Dr. Murphy's personality to live in a measure the life that he lived. If that is done, I am sure your personality will live in proportion as you accomplish and do what this great man did.

I speak of him now because, as I said a moment ago, eighteen years ago he was with us.

Members of the Black Hills District Society, Colonel Lindner as head of the Battle Mountain Sanitarium, and the citizens of Hot Springs, I extend to you the deepest thanks of the Association for the very courteous treatment and entertainment you have afforded us. I am sure that when the opportunity presents itself, and we hope it will soon, and the invitation comes from Hot Springs to meet here, you will find us ready to come. (Applause.)

Dr. J. M. Dodson, Secretary of the Bureau of Public Health and Education of the American Medical Association next presented a paper in place of the one to have been given by Dr. Woodworth, of the A. M. A.

Fourth Scientific Session—Thursday

Morning, August 9, 1928

Dr. Harold Gifford, of Omaha, Neb., presented a paper on Diseases of the Eye, which was discussed by Drs. Isaac, Gifford, and Griswold.

President Hohf: Members of the Association: I take great pleasure in introducing and presenting to you the newly elected President, N. K. Hopkins, of Arlington. (Applause.)

Dr. Hopkins: Ladies and Gentlemen: I hope I can make somewhere near as good a President for you this year as Dr. Hohf has made. It is a great pleasure to me to be honored by being elevated to the position of President of this Society. I was very much surprised when I was put in as Third Vice-President some few years ago.

The House of Delegates and the Council have planned a rather heavy year for the incoming officers. As you know, every other President has a session of the legislature to look forward to, and that happens to be my outlook for the coming year. I want to assure you that it is impossible for any one man to put over a legislative program. Every doctor in the state must become a politician this year if he never has been before. If you men don't do that, the legislative program will fall down.

The House of Delegates has selected just one minor topic for legislative work, and that is the basic science law, but it will be a regular elephant if they try to put it over alone.

I went into the political game this year for the first time. We have nominated Dr. Bostrom for Representative in the legislature. Frankly, if it had not been for the doctors of the county he would not have been elected, although he won't acknowledge that.

Please get into the political game this year, meet every candidate running for office and make him think he is the finest man in the world. If he is elected, all right; if the other fellow is, then he is the best. Please play your politics. Next year at Mitchell I hope to report some success. (Applause.)

President Hohf: I am going to ask the Association to give a rising vote of thanks to Dr. Gifford for his trip up here and his splendid address. (Applause.) It was given.

DISTRICT AND COUNTY ROSTER

ABERDEEN DISTRICT MEDICAL SOCIETY—NO. 1

PRESIDENT

Dunn, J. E. .... Groton

SECRETARY

Mayer, R. G. .... Aberdeen

Adams, B. A. .... Bristol
Adams, J. F. .... Aberdeen
Ahlfs, J. J. .... Conde
Aldrich, H. H. .... Hitchcock
Allen, J. M. .... Rosholt
Alway, J. D. .... Aberdeen
Alway, R. D. .... Aberdeen
Baer, T. H. .... Timber Lake
Bates, W. A. .... Aberdeen
Brenckle, J. F. .... Northville
Bruner, J. E. .... Frederick
Calene, J. L. .... Aberdeen
Chapman, W. S. .... Redfield
Cook, J. F. D. .... Langford
Cooley, F. H. .... Redfield
Countryman, G. E. .... Aberdeen
Crain, C. F. .... Redfield
Crain, F. M. .... Redfield
Creamer, Frank H. .... Dupree
Curtis, J. E. .... Lemmon
Dinsmore, W. E. .... Claremont
Dunn, J. E. .... Groton
Elward, L. R. .... Ashton
Farbaugh, C. L., Robbinsdale
Farrell, W. D. .... Aberdeen
Freyberg, F. W. .... Aberdeen
George, W. A. .... Selby
Gerdes, O. H. .... Eureka
Hart, R. S. .... Groton
Helmey, C. T. .... Mellette
Herman, H. J. .... Webster
Hill, Robert .... Ipswich
Hurley, S. E. .... Gettysburg
Hyden, Anton .... Bowdle
Jackson, E. B. .... Aberdeen
Jacobey, W. K. .... Mobridge
Johnston, M. C. .... Aberdeen
Jones, T. D. .... Bowdle
Katz, O. W. .... Seneca
King, H. I. .... Aberdeen
King, Owen .... Aberdeen
Kraushaar, F. J. O. .... Aberdeen
Kutnewsky, J. K. .... Redfield
Larson, A. J. .... Mobridge
Lavery, C. J. .... Aberdeen
Lister, F. E. .... Faith
Lowe, C. E. .... Mobridge
Lundquist, C. G. .... Leola
McCarthy, P. V. .... Aberdeen
McCauley, C. E. .... Aberdeen
Mayer, R. G. .... Aberdeen
Mertens, J. J. .... Gettysburg
Michael, L. F., San Diego, Calif.
Miller, Frank .... Aberdeen
Miller, J. F. .... Andover
Murdy, B. C. .... Aberdeen
Murdy, R. C. .... Aberdeen
Murdy, R. L. .... Aberdeen
Murphy, T. W. .... Pierpont
Olson, C. O. .... Groton
Pittenger, E. A. .... Aberdeen
Potter, Geo. W. .... Redfield
Ramsey, E. T. .... Clark
Rannev, T. P. .... Aberdeen
Rice, R. B. .... Britton
Rock, A. V. .... Mobridge
Sargent, C. E. .... Isabel
Schmidt, I. H. .... Faulkton
Seeman, C. A. .... Tulare
Senescall, C. R. .... Veblen
Tobin, F. J. .... Parkston
Totten, F. C. .... Lemmon
Twining, G. H. .... Mobridge
Walker, J. F. .... Lemmon
Weishaar, C. H. .... Aberdeen
Whitcomb, E. W. .... Cresbard
White, W. E. .... Ipswich
Whiteside, J. D. .... Aberdeen
Wilson, R. D. .... Aberdeen
Zachritz, G. F. .... Faulkton

WATERTOWN DISTRICT MEDICAL SOCIETY—NO. 2

PRESIDENT

Staley, F. H. .... Vienna

SECRETARY

Parsons, H. C. .... Watertown

Bartron, H. J. .... Watertown
Bates, J. S. .... Clear Lake
Campbell, R. F. .... Watertown
Crandell, W. G. .... Watertown
Crawford, J. H. .... Watertown
Freeburg, H. M. .... Watertown
Hammond, M. J. .... Watertown
Johnson, A. Einar .... Watertown
Kenney, H. T. .... Watertown
Koren, Finn .... Watertown
McIntyre, P. S. .... Bradley
Magee, W. G. .... Watertown
Martin, P. T. .... Gary
Parsons, H. C. .... Watertown
Paulson, A. J. .... Watertown
Richards, G. H. .... Watertown
Scallin, P. R. .... Clark
Sherwood, H. W. .... Doland
Staley, F. H. .... Vienna
Tarbell, H. A. .... Watertown
Vaughn, J. B. .... Castlewood
Williams, C. A. .... Doland

MADISON DISTRICT MEDICAL SOCIETY—NO. 3

PRESIDENT

Youtz, H. L. .... Brookings

SECRETARY

Westaby, J. R. .... Madison

Baughman, D. S. .... Madison
Engelson, C. J. .... Brookings
Green, B. T. .... Brookings
Gulbrandsen, G. H. .... Brookings
Hickman, G. L. .... Bryant
Hoagland, C. C. .... Madison
Jordan, L. E. .... Chester
Kellogg, H. E. .... Madison
Miller, H. A. .... Brookings
Sherwood, C. E. .... Madison
Stoll, A. H. .... Brookings
Tillisch, H. .... Brookings
Torwick, E. E. .... Volga
Warner, O. H., San Diego, Cal.
Westaby, J. R. .... Madison
Westabv, R. S. .... Madison
Youtz, H. L. .... Brookings

PIERRE DISTRICT MEDICAL SOCIETY—NO. 4

PRESIDENT

Hart, B. M. .... Onida

SECRETARY

Robbins, C. E. .... Pierre

Hart, B. M. .... Onida
McLaurin, A. A. .... Pierre
Martin, H. B. .... Harrold
Morrisey, R. J. .... Minneapolis
Northrup, F. A. .... Pierre
Riggs, T. F. .... Pierre
Robbins, C. E. .... Pierre
Stout, Trent E. .... Pierre

HURON DISTRICT MEDICAL SOCIETY—NO. 5

PRESIDENT

Taylor, E. B. .... Huron

SECRETARY

Griffith, W. H. .... Huron

Buchanan, R. A. .... Wessington
Cogswell, M. E. .... Wolsey
Gregory, D. A. .... Miller
Griffith, W. H. .... Huron
Grosvenor, L. N. .... Huron
Hagin, J. C. .... Miller
Launspach, G. W. .... Huron
McKie, J. F. .... Wessington
Paddleford, J. F. .... Miller
Saxton, W. H. .... Huron
Saylor, H. L. .... Huron
Scheib, A. P. .... Hitchcock
Sewell, H. D. .... Huron
Shirley, J. C. .... Huron
Sigler, G. V. .... Highmore
Sprague, B. H. .... Huron
Taylor, E. B. .... Huron
Thomas, Benj. .... Huron
Tschetter, J. S. .... Huron
Wood, T. J. .... Huron
Wright, O. R. .... Huron

MITCHELL DISTRICT MEDICAL SOCIETY—NO. 6

PRESIDENT	
Lloyd, J. H.	Mitchell
SECRETARY	
Mabee, O. J.	Mitchell
Auld, C. V.	Plankington
Ball, W. R.	Mitchell
Beukelman, W. H.	Stickney
Bobb, B. A.	Mitchell
Bobb, C. S.	Mitchell
Bobb, E. V.	Mitchell
Cochran, F. B.	Plankinton
Crawford, R. A.	Chamberlain
Delaney, W. A.	Mitchell
Dick, L. C.	Spencer
Farnsworth, C. P.	Chamberlain
Gifford, A. J.	Alexandria
Gillis, F. D.	Mitchell
Halleck, P. P.	Letcher
Hoyne, A. H.	Salem
Hunt, Wm.	Murdo
Jenkinson, H. E.	Wess. Sprgs.
Jones, A. L.	Corsica
Jones, E. W.	Mitchell
Kelly, R. A.	Mitchell
Kimble, O. A.	Murdo
Lloyd, J. H.	Mitchell
McClellan, S. A.	Kennebec
Mabee, O. J.	Mitchell
Malloy, J. F.	Mitchell
Maytum, W. J.	Alexandria
Miller, J. L.	Spencer
Mizener, Mark	Parkston
Payne, R. H.	Tripp
Smiley, T. B.	Mt. Vernon
Stewart, F. H.	Kimball
Treon, F.	Chamberlain
Waldner, J. L.	Parkston
Young, E. M.	Mitchell

SIOUX FALLS DISTRICT MEDICAL SOCIETY—NO. 7

PRESIDENT	
Gregg, J. B.	Sioux Falls
SECRETARY	
Pankow, L. J.	Sioux Falls
Billion, T. J.	Sioux Falls
Billingsley, P. R.	Sioux Falls
Bliss, P. D.	Colton
Brandon, P. E.	Sioux Falls
Cottam, G. G.	Sioux Falls
Craig, D. W.	Sioux Falls
Culver, C. F.	Sioux Falls
De Vall, F. C.	Garretson
Dickinson, W. E.,	Lincoln, Neb.
Donahoe, S. A.	Sioux Falls
Donahoe, W. E.	Sioux Falls
Eagan, J. B.	Dell Rapids
Egan, M. H.	Sioux Falls
Ericksen, O. C.	Sioux Falls
Fisk, R. R.	Flandreau
Forsberg, C. W.	Sioux Falls
Fulford, G. H.	Sioux Falls
Gage, A. E.	Sioux Falls
Gage, E. E.	Sioux Falls
Gregg, J. B.	Sioux Falls
Grove, A. F.	Dell Rapids
Hannon, L. J.	Hartford
Hanson, O. L.	Valley Springs
Hill, L. G.	Sioux Falls
Housman, W. Mc K.	Sioux Falls
Hummer, H. R.	Canton
Jones, E. A. D.	Sioux Falls
Keller, S. A.	Sioux Falls
Keller, W. F.	Sioux Falls
Lamb, H. H.	Sioux Falls
Larson, M. W.	Canton
Lewison, E.	Canton
Lokke, B. R.	Egan
Meyer, H. C. E.	Sioux Falls
Moe, A. J.	Sioux Falls
Mullen, R. W.	Sioux Falls
Nessa, N. J.	Sioux Falls
Nilsson, F. C.	Sioux Falls
Opheim, O. V.	Sioux Falls
Pankow, L. J.	Sioux Falls
Parke, L. L.	Canton
Perkins, E. L.	Sioux Falls
Putnam, E. D.	Sioux Falls
Putnam, F. I.,	Ellensburg,Wash.
Reagan, R.	Sioux Falls
Rider, A. S.	Flandreau
Roberts, W. P.	Sioux Falls
Roland, C. L.	Humboldt
Stegeman, S. B.	Salem
Stenberg, E. S.	Sioux Falls
Stephens, E. E.	Sioux Falls
Stern, M. A.	Sioux Falls
Stevens, G. A.	Sioux Falls
Stevens, R. G.	Sioux Falls
Subera, H. W.	Sioux Falls
Tufts, A. H.	Sioux Falls
Turner, J. F.	Canton
Van Demark, G. E.	Sioux Falls
Volin, H. P.	Lenox
Zimmerman, Goldie	Sioux Falls

YANKTON DISTRICT MEDICAL SOCIETY—NO. 8

PRESIDENT	
Bigler, Lottie G.	Yankton
SECRETARY	
Hohf, J. A.	Yankton
Abts, F. J.	Yankton
Adams, G. S.	Yankton
Albertson, G. R.	Vermillion
Beall, L. F.	Irene
Berry, S. G.	Tyndall
Bigler, Lottie G.	Yankton
Blezek, F. M.	Tabor
Brookman, L. J.	Vermilion
Burkland, P. R.	Vermilion
Bushnell, Wm. F.	Elk Point
Cluney, W. T.	Yankton
Crecelius, H. A.	Lakeport, Cal.
Cruickshank, T.	Vermilion
Dugnid, J. O.	Springfield
Freshour, I. M.	Yankton
Frink, R. P.	Wagner
Glazier, J. J.	Springfield
Gross, C. C.	Yankton
Hohf, J. A.	Yankton
Hohf, S. M.	Yankton
Isaac, J. P.	Freeman
Johnson, G. E.	Avon
Joyce, E.	Hurley
Kalayjian, D. S.	Parker
Kauffman, E. J.	Marion
Keeling, C. M.	Springfield
Klima, H.	Tyndall
Landmann, G. A.	Scotland
Langley, C. S.	Lake Andes
Leighton, I. W.	Scotland
Matlock, W. L.	Elk Point
Moore, F. A.	Lesterville
Morehouse, E. M.	Yankton
Murphy, Jennie C.	Yankton
Ohlmacher, J. C.	Vermillion
Pangburn, M. W.	Scotland
Pfister, F.	Webster
Remey, C. E.	Chicago
Smith, E. C.	Yankton
Smith, F. C.	Lake Andes
Stansbury, E. M.	Vermilion
Sweezy, F. A.	Wakonda
Swett, C. H.	Wagner
Trierweiler, J. E.	Yankton
Willhite, F. V.	Redfield
Wipf, A. A.	Freeman

BLACK HILLS DISTRICT MEDICAL SOCIETY—NO. 9

PRESIDENT	
Morse, W. E.	Rapid City
SECRETARY	
Stewart, J. L.	Lead
Allen, A. G.	Hot Springs
Bentley, W. S.	Sioux Falls
Bilger, F. W.	Hot Springs
Chassell, J. L.	Belle Fourche
Clough, F. E.,	Pasadena, Calif.
Crane, H. L.	L'Oryra, Peru, S. A.
Ewald, P. P.	Lead
Fleeger, R. B.	Lead
Geyerman, P. F.	Deadwood
Hare, Carlyle	Spearfish
Hargens, C. W.	Hot Springs
Heinemann, A. A.	Wasta
Howe, F. S.	Deadwood
Hunsaker, E. D.	Camp Cook
Ince, H. J. T.	Rapid City
Jackson, A. S.	Lead
Jackson, R. J.	Rapid City
Jernstrom, R. E.	Rapid City
Lindener, T.	Hot Springs
Listner, F. E.	Faith
Long, Martin	Custer
Mattox, N. E.	Lead
Merdanian, S. K.	Oelrichs
Miller, George	Spearfish
Mills, G. W.	Wall
Minty, F. W.	Rapid City
Mitchell, Fred L.	Newell
Morse, W. E.	Rapid City
Morsman, C. F.	Hot Springs
Newby, H. D.	Rapid City
O'Toole, T. F.	New Underwood

BLACK HILLS DISTRICT MEDICAL SOCIETY—NO. 9—Continued

Owen, N. T.	Rapid City
Pemberton, M. O.	Deadwood
Price, C. R.	Orient
Radusch, Freda	Rapid City
Ramsey, Guy	Philip
Rogers, J. S.	Hot Springs
Ruud, H. O.	Hot Springs
Stewart, J. L.	Lead
Threadgold, J. O.,	Belle Fourche
Vercoe, W. L.	Deadwood
Walsh, J. M.	Rapid City
Walters, C. A.	Belle Fourche
Woodworth, R. E.	Sanator
Young, Blaine A.	Hot Springs

ROSEBUD DISTRICT MEDICAL SOCIETY— NO. 10

PRESIDENT	
Murman, H. A.	Winner
SECRETARY	
Overton, R. V.	Winner
Bouza, F. E.	White River
Bryant, F. A.	Herrick
Carmack, A. O.	Colome
Cook, J. O.	Carter
Kenaston, H. R.	Bonesteel
Malster, R. M.	Carter
Matousek, W. J.	Gregory
Murnan, H. A.	Winner
Overton, R. V.	Winner
Pickard, E. W.	Bonesteel
Quinn, J. F.	Phillips
Quinn, R. J.	Burke
Salladay, I. R.	White River
Schaefer, J. F.	Colome
Wilson, F. D.	Winner

KINGSBURY DISTRICT MEDICAL SOCIETY—NO. 11

PRESIDENT	
Jamieson, G. V.	DeSmet
SECRETARY	
Stockdale, C. P.	Erwin
Ahern, J. J.	Oldham
Bostrom, A. E.	De Smet
Butler, C. A.	Lake Preston
Cowgill, C. H.,	Hunt. Pk., Cal.
Dyar, B. A.	De Smet
Feige, C. A.	Iroquois
Grove, E. H.	Arlington
Hopkins, N. K.	Arlington
Irvine, G. B.	Lake City, Minn.
Jamieson, G. V.	De Smet
Rae, H. B.	Lake Preston
Scanlon, D. L.	Volga
Stockdale, C. P.	Ethan

WHETSTONE VALLEY DISTRICT MEDICAL SOCIETY—NO. 12

PRESIDENT	
Hawkins, A. P.	Wuabay
SECRETARY	
Flett, Chas.	Milbank
Brown, A. E.	Webster
Church, E. O.	Big Stone City
Cliff, F. N.	Milbank
DeTuncy, A. E.	Milbank
Flett, Chas.	Milbank
Harris, H. G.	Wilmot
Hawkins, A. P.	Waubay
Hayes, C. E.	New York
Jacotel, J. A.	Milbank
Jenkins, P. B.	Waubay
Lowthain, G. W.	Milbank
Peabody, H. C.	Webster
Peabody, P. D.	Webster
Pearson, Aug.	Peever
Severide, A. L.,	Portland, Ore.
Yaeger, W. W.	Revillo

MINER DISTRICT MEDICAL SOCIETY—NO. 13

PRESIDENT	
Loring, F. M.	Artesian
SECRETARY	
Barthel, J. F.	Howard
Amsberry, A. L.	Carthage
Barthell, J. F.	Howard
Burman, G. E.	Carthage
Hauge, L. J.	Howard
Lierle, G. A.	Canova
Loring, F. M.	Artesian
Miller, Jos. L.	Canova
Noble, A. G.,	McMinnville, Ore.

ALPHABETICAL ROSTER

Abts, F. J.	Yankton
Adams, B. A.	Bristol
Adams, G. S.	Yankton
Adams, J. F.	Aberdeen
Ahern, J. J.	Oldham
Ahlfs, J. J.	Conde
Albertson, G. R.	Vermillion
Aldrich, H. H.	Hitchcock
Allen, A. G.	Hot Springs
Allen, J. M.	Rosholt
Alway, J. D.	Aberdeen
Alway, R. D.	Aberdeen
Amesberry, A. L.	Carthage
Auld, C. V.	Plankinton
Baer, T. H.	Timberlake
Ball, W. R.	Mitchell
Barthell, J. F.	Howard
Bartron, H. J.	Watertown
Bates, J. S.	Clear Lake
Bates, W. A.	Aberdeen
Baughman, D. S.	Madison
Beall, L. F.	Irene
Bentley, W. S.	Sioux Falls
Berry, S. G.	Tyndall
Beukelman , W. H.	Stickney
Bigler, Lottie G.	Yankton
Billion, T. J.	Sioux Falls
Billingsley, P. R.	Sioux Falls
Bilger, F. W.	Hot Springs
Blezek, F. M.	Tabor
Bliss, P. D.	Colton
Bobb, B. A.	Mitchell
Bobb, C. S.	Mitchell
Bobb, E. V.	Mitchell
Bostrom, A. E.	De Smet
Bouza, F. E.	White River
Brandon, P. E.	Sioux Falls
Brenckle, J. F.	Northville
Brookman, L. J.	Vermilion
Brown, A. E.	Webster
Bruner, J. E.	Frederick
Bryant, F. A.	Herrick
Buchanan, R. A.	Wessington
Burkland, P. R.	Vermilion
Burman, G. E.	Carthage
Bushnell, Wm. F.	Elk Point
Butler, C. A.	Lake Preston
Calene, J. L.	Aberdeen
Campbell, R. F.	Watertown
Carmack, A. O.	Colome
Chapman, W. S.	Redfield
Chassell, J. L.	Bellefourche
Church, E. O.	Big Stone City
Cliff, F. N.	Milbank
Clough, F. E.,	Pasadena, Calif.
Cluney, W. T.	Yankton
Cochrane, F. B.	Plankinton
Cogswell, M. E.	Wolsey
Cook, J. F. D.	Langford
Cook, J. O.	Carter
Cooley, F. H.	Redfield
Cottam, G. G.	Sioux Falls
Countryman, G. E.	Aberdeen
Cowgill, C. H.,	Huntington, Cal.
Craig, D. W.	Sioux Falls
Crain, C. F.	Redfield
Crain, F. M.	Redfield
Crane, H. L.,	LaOroya, Peru, S.A.
Crandell, W. G.	Watertown
Crawford, I. H.	Watertown
Crawford, R. A.	Chamberlain
Crawford, R. D.	Watertown
Creamer, F. H.	Dupree
Crecelius, H. A.	Lakeport, Cal.
Cruickshank, T.	Vermilion
Culver, C. F.	Sioux Falls
Curtis, J. E.	Lemmon
De Vall, F. C.	Garretson

Delaney, W. A.	Mitchell
DeTuncy, A. E.	Milbank
Dick, L. C.	Spencer
Dickinson, W. E.,	Lincoln,Neb.
Dinsmore, W. E.	Claremont
Donahoe, S. A.	Sioux Falls
Donahoe, W. E.	Sioux Falls
Duguid, J. O.	Springfield
Dunn, J. E.	Groton
Dyar, B. A.	De Smet
Eagan, J. B.	Dell Rapids
Egan, M. H.	Sioux Falls
Elward, L. R.	Ashton
Engelson, C. J.	Brookings
Erickson, O. C.	Sioux City
Ewald, P. P.	Lead
Farabaugh, C. L.,	Robbinsdale
Farnsworth, C. P.,	Chamberlain
Farrell, W. D.	Aberdeen
Feige, C. A.	Canova
Fisk, R. R.	Flandreau
Fleeger, R. B.	Lead
Flett, Chas.	Milbank
Forsberg, C. W.	Sioux City
Freeburg, H. M.	Watertown
Freshour, I. M.	Yankton
Freyberg, F. W.	Aberdeen
Frink, R. P.	Wagner
Fulford, G. H.	Sioux Falls
Gage, A. E.	Sioux Falls
Gage, E. E.	Sioux Falls
George, W. A.	Selby
Gerdes, O. H.	Eureka
Geyerman, P. F.	Hot Springs
Gifford, A. J.	Alexandria
Gillis, F. D.	Mitchell
Glazier, J. J.	Springfield
Gregg, J. B.	Sioux Falls
Gregory, D. A.	Miller
Green, B. T.	Brookings
Griffith, W. H.	Huron
Gross, C. C.	Yankton
Grosvenor, L. N.	Huron
Grove, E. H.	Arlington
Gulbrandsen, G. H.,	Brookings
Hagin, J. C.	Miller
Hague, L. J.	Howard
Halleck, P. P.	Letcher
Hammond, M. J.	Watertown
Hanson, O. L.	Valley Springs
Hannon, L. J.	Hartford
Hare, Carlyle	Spearfish
Hargens, C. W.	Hot Springs
Harris, H. G.	Wilmot
Hart, B. M.	Onida
Hart, R. S.	Groton
Hawkins, A. P.	Waubay
Hayes, Clara E.	New York
Heinemann, A. A.	Wasta
Helmey, C. T.	Mellette
Herman, H. J.	Webster
Hickman, G. L.	Bryant
Hill, L. G.	Sioux Falls
Hill Robert	Ipswich
Hoagland, C. C.	Madison
Hohf, J. A.	Yankton
Hohf, S. M.	Yankton
Hopkins, N. K.	Arlington
Housman, W. McK.	Sioux Falls
Howe, F. S.	Deadwood
Hoyne, A. H.	Salem
Hummer, H. R..	Canton
Hunsaker, E. D.	Camp Cook
Hunt, Wm.	Murdo
Hurley, S. E.	Gettysburg
Hyden, A.	Bowdle
Ince, H. J. T.	Rapid City
Irvine, G. B.,	Lake City, Minn.
Isaac, J. P.	Freeman
Jackson, A. S.	Lead
Jackson, E. B.	Aberdeen
Jackson, R. J.	Rapid City
Jacobey, W. K.	Mobridge
Jacotel, J. A.	Milbank
Jamieson, G. V.	De Smet
Jenkinson, H. E.	Wess. Sprgs.
Jernstrom, R. E.	Rapid City
Jenkins, P. B.	Waubay
Johnson, A. Einar	Watertown
Johnson, G. E.	Avon
Johnston, M. C.	Aberdeen
Jones, A. L.	Corsica
Jones, E. A. D.,	Sioux Falls
Jones, E. W.	Mitchell
Jones, T. D.	Bowdle
Jordan, L. E.	Chester
Joyce, E.	Hurley
Kalayjian, D. S.	Parker
Katz, O. W.	Seneca
Kauffman, E. J.	Marion
Keeling, C. M.	Springfield
Keller, S. A.	Sioux Falls
Keller, W. F.	Sioux Falls
Kellogg, H. E.	Madison
Kelly, R. A.	Mitchell
Kenaston, H. R.	Bonesteel
Kenney, H. T.	Watertown
Kimble, O. A.	Murdo
King, H. I.	Aberdeen
King, Owen	Aberdeen
Klima, H.	Tyndall
Koren, Finn	Watertown
Kraushaar, F. J.	Aberdeen
Kutnewsky, J. K.	Redfield
Lamb, H. H.	Sioux Falls
Landmann, G. A.	Scotland
Langley, C. S.	Lake Andes
Larson, A. J.	Mobridge
Larson, M. W.	Canton
Launspach, G. W.	Huron
Lavery, C. J.	Aberdeen
Leighton, I. W.	Scotland
Lewison, E.	Canton
Lierle, G. A.	Canova
Lindener, T.	Hot Springs
*Lindner, E. R.	Hot Springs
Lister, F. E.	Faith
Lloyd, J. H.	Mitchell
Lokke, B. R.	Egan
Long, Martin	Custer
Loring, F. M.	Artesian
Lowe, C. E.	Mobridge
Lowthian, G. W.	Boise, Idaho
Lundquist, C. G.	Leola
McCarthy, P. V.	Aberdeen
McCauley, C. E.	Aberdeen
McClellan, S. A.	Kennebec
McIntyre, P. S.	Bradley
McKie, J. F.	Wessington
McLaurin, A. A.	Pierre
McMannus, C.	Hayti
Mabee, O. J.	Mitchell
Magee, W. G.	Watertown
Malloy, J. F.	Mitchell
Malster, R. M.	Carter
Martin, H. B.	Harrold
Martin, P. T.	Gary
Matlock, W. L.	Elk Point
Matousek, W. J.	Gregory
Mattox, N. E.	Lead
Mayer, R. G.	Aberdeen
Maytum, W. J.	Alexandria
Merdanian, S. K.	Oelrichs
Mertens, J. J.	Gettysburg
Meyer, H. C. E.	Sioux Falls
Michael, L. F.,	San Diego, Calif.
Miller, Frank	Aberdeen
Miller, George	Spearfish
Miller, H. A.	Brookings
Miller, J. F.	Andover
Miller, Jos. L.	Canova
Miller, J. L.	Spencer
Mills, G. W.	Wall
Minty, F. W.	Rapid City
Mitchell, Fred L.	Newell
Mizener, Mark	Parkston
Moe, A. J.	Sioux Falls
Moore, F. A.	Yankton
Morehouse. E. M.	Yankton
Morrisey, R. J.	Minneapolis
Morse, W. E.	Rapid City
Morsman, C. F.	Hot Springs
Mullen, R. W.	Sioux Falls
Murdy, B. C.	Aberdeen
Murdy, Robert C.	Aberdeen
Murdy, R. L.	Aberdeen
Murnan, H. A.	Winner
Murphy Jennie C.	Yankton
Murphy, T. W.	Pierpont
Nessa, N. J.	Sioux Falls
Newby, H. D.	Rapid City
Nilsson, F. C.	Sioux Falls
Northrup, F. A.	Pierre
O'Toole, T. F.	New Underwood
Ohlmacher, J. C.	Vermillion
Olson, C. L.	McIntosh
Olson, C. O.	Groton
Opheim, O. V.	Sioux Falls
Overton, R. V.	Winner
Owen, N. T.	Rapid City
Paddleford, J. F.	Miller
Pankow, L. J.	Sioux Falls
Parke, L. L.	Canton
Parsons, H. C.	Watertown
Pangburn, M. W.	Scotland
Paulson. A. J.	Watertown
Payne, R. H.	Tripp
Peabody, H. C.	Webster
Peabody, P. D.	Webster
Pearson, Aug.	Peever
Pemberton, M. O.	Deadwood
Perkins, E. L.	Sioux Falls
Peterson, C. M.	Sissaton
Pfister, F.	Webster
Pickard, E. W.	Bonesteel
Pittenger, E. A.	Aberdeen
Potter, Geo. W.	Redfield
Price, C. R.	Orient
Putnam, E. D.	Sioux Falls
Putnam, F. I.,	Ellensburg, Wash.
Quinn, J. F.	Philips
Quinn, R. J.	Burke
Radusch, Freda J.	Rapid City
Rae, Harold B.,	Wheatley, Wyo.
Ramsey, E. T.	Clark
Ramsey, Guy	Philip
Ranney. T. P.	Aberdeen
Reagan, R.	Sioux Falls
Remey. C. E.	Chicago
Rice, D. B.	Britton
Richards, G. H.	Watertown
Rider, A. S.	Flandreau
Riggs, T. F.	Pierre
Robbins, C. E.	Pierre
Roberts, W. P.	Sioux Falls
Rock, A. V.	Mobridge
Rogers, J. S.	Hot Springs
Roland, C. L.	Humboldt

Ruud, H. O.	Hot Springs
Salladay, I. R.	White River
Sargent, C. E.	Isabel
Saxton, W. H.	Huron
Saylor, H. L.	Huron
Scallin, P. R.	Clark
Scanlon, D. L.	Volga
Schaefer, J. F.	Colome
Scheib, A. P.	Hitchcock
Schmidt, I. H.	Faulkton
Seeman, C. A.	Tulore
Senescall, C. R.	Veblen
Severide, A. L.	Portland, Ore.
Sewell, H. D.	Huron
Sherwood, C. E.	Madison
Sherwood, H. W.	Doland
Shirley, J. C.	Huron
Sigler, G. V.	Highmore
Smiley, T. B.	Mt. Vernon
Smith, E. C.	Lake Andes
Smith, F. C.	Yankton
Sprague, B. H.	Huron
Staley, F. H.	Vienna
Stansbury, E. M.	Vermilion
Stegeman, S. B.	Salem
Stenberg, E. S.	Sioux Falls
Stephens, E. E.	Sioux Falls
Stern, M. A.	Sioux Falls
Stewart, F. H.	Kimball
Stewat, J. L.	Nemo
Stevens, G. A.	Sioux Falls
Stevens, R. G.	Sioux Falls
Stockdale, C. P.	Erwin
Stoll, A. H.	Brookings
Stout Trent	Pierre
Subera, H. W.	Sioux Falls
Sweezy, F. A.	Wakonda
Swett, C. H.	Wagner
Tarbell, H. A.	Watertown
Taylor, E. B.	Huron
Thomas, Benj.	Huron
Threadgold, J. O.,	Belle Forche
Tillisch, H.	Brookings
Tobin, F. J.	Parkston
Torwick, E. E.	Volga
Totten, . C.	Isabel
Treon, F.	Chamberlain
Trierweiler, J. E.	Yankton
Tschetter, J. S.	Huron
Tufts, A. H.	Sioux Falls
Turner, J. F.	Canton
Twining, G. H.	Mobridge
Van Demark, G. E.	Sioux Falls
Vaughn, J. B.	Castlwood
Vercoe, W. L.	Deadwood
Violin, H. P.	Lennox
Waldner, J. L.	Parkston
Walker, J. F.	Lemmon
Walsh, J. M.	Rapid City
Walters, C. A.	Belle Fourche
Warner, O. H.,	San Diego, Cal.
Weishaar, C. H.	Aberdeen
Westaby, J. R.	Madison
Westaby, R. S.	Madison
Whitcomb, E. W.	Cresbard
White, W. E.	Ipswich
Whiteside, J. D.	Aberdeen
Willhite, F. V.	Redfield
Williams, C. A.	Doland
Wilson, F. D.	Winner
Wilson, R. D.	Aberdeen
Wipf, A. A.	Freeman
Wood, T. J.	Huron
Woodworth, R. E.	Sanator
Wright, O. R.	Huron
Yaeger, W. W.	Revillo
Young, B. A.	Hot Springs
Young, E. M.	Mitchell
Youtz, H. L.	Brookings
Zachritz, G. F.	Faulkton
Zimmerman, Goldie	Sioux Falls

PRESIDENT'S ADDRESS: THE SOUTH DAKOTA STATE MEDICAL ASSOCIATION*

By S. M. Hohf, M.D., F.A.C.S.

YANKTON, SOUTH DAKOTA

Members of the South Dakota State Medical Association:

During the past year your president and secretary attended nine meetings of the thirteen districts comprising the component parts of our Association. These visitations were made in accordance with a resolution adopted by the House of Delegates three years ago in which it was deemed advisable that the head officers of the Association pay a visit to each component district society during their tenure of office, the object of these visits being to become better acquainted with the men in the field than a single annual meeting affords and to observe conditions as they exist in the several districts throughout this great state. Be assured, however, that distances are great, and in traveling from border to border one appreciates the magnitude of our state, almost an empire in itself, with wonderful developments still in the making. It was our most earnest desire to attend a stated meeting of each society, but the widespread distances, together with unfavorable road conditions when meetings were called, early demonstrated that we were bound to find limits to our traveling proclivities. Nevertheless it is urged that encouragement be given to incoming officers to visit the meetings of the different societies on account of the lessons to be learned, invaluable to those who head our state organization. These visits should be made more and more possible as expediency in travel increases.

Meetings everywhere, with one or two exceptions, were well attended, and marked interest was evidenced in the splendid programs that were rendered. The absence of outside men filling places on the programs was noticeable, and the papers, from a scientific standpoint, followed by discussions indicating study and knowledge of the subject in hand, were all creditable to the men in the district who presented them. This is as it should be. There is no doubt that the scientific side of the practice of medicine in the state of South Dakota is on an equality with that of any state in the Union. Brains are found here. There appears, however, to be an utter absence on the official programs of subjects that deal with the social side of medicine and the exceedingly vital problems of medical economics. It is not overstating facts when we mention that at this moment there is probably more unrest among the doctors of the state than there has ever been before. The cause of this unrest is largely economic. Moreover if public opinion is to be directed in matters medical for the future, the social and economic side of medicine must be discussed in our society meetings. Medical economics must find a place on our official programs with sufficient frequency to force them to the attention of every member of our organization. It is urged that one or more entire meetings be devoted to these subjects each year in every district in the state.

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*President's Address, presented before the Forty-seventh Annual Meeting of the South Dakota State Medical Association at Hot Springs, August 8 and 9, 1928.

A committee on medical economics should be appointed from this association, this committee to investigate the economic status of physicians throughout the state and to offer such recommendations as, in its judgment, might be of benefit in the various districts. Our Constitution and By-laws provide for this.

On January 14 and 15 a Regional State Medical Conference was held at St. Paul, Minnesota, to which your association officers were invited by the Minnesota State Medical Association.

This initial meeting was made up of the officers of the states of Wisconsin, Minnesota, North Dakota, South Dakota, and Iowa, comprising the region. It was called for the purpose of discussing medical problems of mutual interest to the profession of these states. It was thought that our problems being held in common, a get-together meeting, in which these problems might be discussed frankly and freely, should result in much good. To indicate to you, in a measure, the scope of the program outlined, it may be mentioned that reports from the following committees were presented: Hospital and Medical Education, Public Health Education, Medical Schools, Contract Practice, Dues, Editing and Publishing, Heart Committee, Military Affairs, Wisconsin Basic Science Law, Minnesota Basic Science Law and the New Medical Practice Art of Minnesota. And the following, which elicited animated discussions: The County Medical Society, The Secretary's Relationship to the Legislative Program, The Finances of the State Medical Association, Co-operation Between the Medical Profession and the Druggist in Regard to Public Health, The Medical Profession and Newspaper Publicity, How the Rural Medical Man and Newspaper Man Can Cooperate, How a Component Society can Make Its Meetings Interesting.

These reports were freely discussed in round-table talks, and, we believe, many knotty problems were made clear. At the close of the meeting every officer present felt that it was more than worth while and that it should be made a permanent organization. Temporary officers were elected and a date fixed for the next meeting. It was decided to call this meeting June 10, a day in advance of the A. M. A. meeting in Minneapolis. At this meeting permanent officers were elected and the following subjects opened for discussion: Basic Science Legislation, Public Education Programs, Prevention of Malpractice Cases, The Nebraska Physicians' Lien Laws in Accident Cases, Annual Registration of Physicians, Committee Work in State Organizations, and Contract Practice.

We feel that the Regional State Medical Conference is a going concern and that the profession will be benefited by its accomplishments. We hope our association officers will continue to take active interest in their conference in the future.

A meeting of your association officers and councilors was called on March 28, at Huron. The officers were all present, and the following districts represented by their councilors: Districts 1, 2, 5, 6, 8, 9, 11, and 13. It was the purpose, in calling this meeting, to acquaint the various district societies, through their councilors, with their mutual requirements as revealed by our visitations and to establish a closer contact with the state association working toward a fuller co-operation in matters pertaining especially to legislation, education, public health publicity and protection. This meeting was also well worth while and problems common to all districts were freely discussed. These matters will be presented to your House of Delegates in due time by the proper committees.

MEMBERSHIP

Our association is numerically stronger than it ever was before, and we sincerely believe it is rendering such service as will merit the approval of the profession throughout the state. It should commend itself to all eligible physicians who are not now in the organization and who have an earnest desire to advance the best interests of the profession. It is true that, here and there, criticism is heard in that the organization is not functioning to the best advantage, but it is individual, and comes mainly from those who are not associated with organized medicine. Their bark is wasted energy and to be effective they should belong to the organization where constructive criticism is invited. We are not perfect, nor is any other group of men, and we fully appreciate that there is much yet to be done. It should be to the interest of every physician to aid and strengthen, by his membership, the district in which he lives, and through his district society, the state association of which he automatically becomes a member. It is only by organized and concerted action that improvement in local and state conditions can best be brought about and controlled. There is strength in numbers and out of the mental processes of many minds may be crystalized those ideas and ideals towards which all right thinking men aspire. This should hold true in our association which should include every reputable physician within the borders of our state.

The A. M. A. directory lists 551 registered physicians in the state. Our secretary reports a paid up membership of 387, thus leaving a balance of 164, or approximately one third of the registered physicians who do not belong and presumably do not participate in the activities of any organization. Frankly and candidly this is not a healthy condition. It is true that probably not all of those who are out are available for membership, but it is urged that the officers of each district continue to canvass the list of physicians in their jurisdiction and endeavor to induce those who are reputable to affiliate with their society.

Moreover there are at this time fourteen men in the various activities in the state, namely, Veterans Bureau, Federal Service, Indian Agencies, and so forth, who should be made eligible to membership in our societies. These men are not licensed in the state and in accordance with the rulings of the A. M. A. are ineligible under our present Constitution and By-laws. A new section should be added to the same, establishing or creating an associate fellowship, whereby these desirable men may be admitted to our association. It is recommended that each of our component societies give this important matter due consideration in the revision of their Constitution and By-Laws.

LEGISLATION

About five months from now our state legislature will again swing into action and possibly hundreds of measures will be introduced, all, no doubt, in the interest of the public welfare, but many will be of an adverse nature. In this hopper, measures will probably be included in which you and I and the entire medical profession of the state should be vitally interested, and it is recommended that your Committee on Legislation become immediately active.

It is again necessary to call your attention to the fact that our state is favored with three boards of medical examiners, medical, yes, because they are all simply that in the real meaning of the word. Two of these boards are cults who are lawfully authorized to be the sole judges of the qualifications of their members who seek a license to practice the healing art in our state.

Now when one scrutinizes the mental attainments of the cult matriculant, the courses offered by his school and his hours of study and training for graduation, it is amazing to contemplate the situation existing in our midst in which the medical practice act has so relaxed as to permit the granting of a license to practice the healing art to this green product.

The cult thus legalized is either a menace or the requirements of the student of medicine have become definitely a hardship and are manifestly unfair. We do not presume to hold a brief for the cults, but who has not had painful experiences with cult tragedies in his attempt to practice medicine? And if the cultist, as he is at present constituted, may assume, lawfully, full responsibility for the lives and health of the community and is capable of thus discharging that responsibility safely, then medicine has indeed advanced beyond reasonable bounds in service to the people. But we believe the situation to be purely this, that the public does not actually want cultism any more than it wants quackery, and that it differs with us in so far as it is not informed. Consequently all types of cults find support. The intelligent people of a community, the well intentioned clergymen, philanthropists, and financiers, who are usually fairly level-headed individuals, are found to be, all too frequently, their sponsors. Moreover we believe our lawmakers are as honestly desirous of truthful information on a question pertaining to any phase of medicine upon which they may determine their course of action, as we are. Hence the problem, to my mind, is clearly one of education in which every member of the medical profession should fit himself to become an active educator. If we fail, or assume this responsibility reluctantly, why complain?

The state legislative committee must continue its activities, but with increased energy, in promulgating information, not only to our legislators, but also to the physicians of the state. This should be followed by the introduction again, in the next session of our legislature, of a bill originally introduced by your association officers during the last session, but which met defeat, and designated as a Basic Science Bill. The lead has been taken by the States of Connecticut, Wisconsin, Minnesota, Washington, and Nebraska where similar measures have been introduced and enacted into law.

There are, however, apparent defects in the law enacted, owing to legislative restrictions and probably unforeseen variable state situations. These should be corrected in so far as it can be done and the most workable features of the Basic Science Law thus far operating, incorporated in our measure.

Your House of Delegates will be presented with a draft of such a bill, based upon that proposed by the A. M. A. but adapted, as near as can be ascertained, to existing conditions in our state. It is recommended that this draft be carefully scrutinized from all angles, immediately, in order that it may be made shot-proof, with the entire medical profession back of it, when ready for introduction in the next session of our legislature.

There should be enacted into law in our state a statute providing that physicians, nurses, and hospitals shall be entitled to a lien for their services on moneys receivable by their patients on account of injuries inflicted by others, when the services rendered were necessary in the treatment of the injuries so inflicted. During the 1927 legislative session in Nebraska an act relating to liens covering the above points was enacted and we believe that a measure affording protection in this type of service is wise and needful legislation.

To facilitate its consideration by our legislative committee, the paragraph relating to liens as enacted by the State of Nebraska, is herewith appended:

Section 1. *Physician's Lien.*—Whenever any person shall employ a physician, nurse, or hospital to perform professional service or services of any nature in the treatment of or in connection with an injury and such injured person shall claim damages from the party causing the injury, such physician, nurse, or hospital, as the case may be, shall have a lien upon any sum awarded the injured person in judgment or obtained by settlement or compromise on the amount due for the reasonable value of services necessarily performed: Provided that no such lien shall be valid against anyone coming under the Workmen's Compensation Act. In order to prosecute such lien it shall be necessary for such physician, nurse or hospital to serve a written notice upon the person or corporation from whom damages are claimed that such physician, nurse, or hospital claims a lien for such services, and stating therein the amount due and the nature of such services: Provided, however, that whenever an action is pending in court for the recovery of such damages, it shall be sufficient to file the notice of such lien in the pending action.

This act was approved April 20, 1927.

(Federal)

A bill to amend the Revenue Act of 1926 has again been before the Senate Committee on finance. This bill called for an immediate discontinuance of the discrimination against the medical profession, now practicing under the act with respect to the deduction of traveling expenses in computing federal income taxes. Appeals made by letters and telegrams by your association and the medical profession throughout the nation failed to obtain the remedial legislation. The fight must, therefore, be continued during the next session of congress when it will again, undoubtedly, be up for action.

This Revenue Act is a discriminating measure, since, as you already know, chemists, ministers, and other professional men may, in computing their federal income taxes, deduct such expenses, but physicians can not. We do not understand this discrimination, and the act should be resented by every physician in the nation.

We are pleased, however, to report that our efforts in regard to the appeal made with respect to the Harrison Narcotic Act were successful. In this act the attempt was made to increase the tax from one dollar to three dollars, about which you are perhaps already informed.

Other federal measures in which the association must take continued interest are the following:

Amendment to the National Prohibition Act. Legislation should be supported which would permit physicians to prescribe for patients who are in need of alcohol or alcoholic liquors, such amounts as the attending physician thinks necessary.

The Sheppard-Towner Maternity and Infancy Act should be closely watched. Federal activities, under the act, terminate by law June 30, 1929. Do not rest at ease, however, believing that the proponents of this paternalistic piece of federal legislation will fall asleep. They are ever alert and wakeful and if this measure of folly dies, another will be born. It will, therefore, behoove the medical profession to be on its guard with respect to this and other measures, state or federal, that have to do with medicine but under lay control.

WELFARE ORGANIZATIONS

Reference has been made to the unprecedented unrest in the medical profession of the state. Not a few of the causes of this unrest are the activities of welfare organizations and social service zealots with whom the profession is placed in unfair competition.

The increase of wealth and prosperity throughout the country and in which the medical profession does not participate, has caused the more prosperous of our people to feel a sense of responsibility toward the less fortunate. This is commendable, but it has led to the birth of a multifarious lot of aid societies, health agencies, and what not. Many of these have cast restrictions to the winds in that they find it convenient not to ask questions with respect to the economic status of those who present themselves, but all, presumably, seeking to accomplish the same purpose,—the care of the indigent sick. As a result there has naturally developed an overlapping of interests, the needless expenditure of moneys involved, and the multiplication of office forces.

Curiously enough, people who support and lend greatest encouragement to these organizations never permit them to interfere with their private business or income, except the medical profession.

We have lent much encouragement to them, but in a negative way, in as much as we have not aided materially in molding public thought, nor have we assisted, by counsel or direction, in influencing, in any manner, the activities of these so-called charitable organizations. There can be no question that no one is better qualified to act in the medical needs of the people of a community than the physician, and we must insist that all welfare organizations shall be medically controlled.

This association should place itself on record, requiring all medical charities to submit their plans to the association for endorsement or rejection. These plans should indicate in detail the service they propose to render, the need of their activities in our state, the people they intend to serve, their method of financing, and the names of the officials of the institution that is sponsoring them.

We trust that your committee on public policy will give this matter serious consideration.

DUES

Our Secretary-treasurer reports that the average per capita receipts by the association from 1920 to 1928, inclusive, have been $4.62, the average expenditure for the same period $4.45, leaving a per capita reserve of 17 cents. It is perfectly ridiculous to think of maintaining an "open shop" to function properly and accomplish worth-while results in our association, if this picayunish margin is to continue. It cannot be done. Furthermore, he advises that with the ever-mounting costs of operating, your association faced a deficit of $1.15 per capita for the year just closed, 1927, and that the accumulated reserve of previous years has been drawn upon to meet this deficit. This must not continue. We are, therefore, confronted with an immediate increase in dues.

Another session of the legislature will be upon us before the 1929 dues will be available, and if important legislation, to which reference has been made, is undertaken, there should be in the hands of the treasurer, immediately, a fund of at least $1,500. It is reported that in a nearby state chiropractors pay annual dues of $120 per capita merely as a starter, and for the upkeep of their organization. Also that special assessments up to $500 are frequently levied upon its membership, all of which, no doubt, lend enthusiasm to their activities. Now, we do not require any such sums, but be assured that your association can not continue to function on a per capita assessment of $5. With this situation before your Board of Councilors in the meeting at Huron it was there voted that a special assessment of $5 be made, to be used for the purpose of legislation by the Legislative Committee.

Money spent in dues to the State Association, as well as to the district societies, is the safest investment that you can make. The welfare of the entire profession depends upon the financial, as well as the moral, support that you give it. You owe this to your profession.

INSURANCE

The unscrupulous lawyer, the ambulance chaser, and the occasional disgruntled patient are in our midst, as elsewhere, and the profession of South Dakota is not immune from the possible attacks of this class of grafters. It is conceded that medical men should be held responsible for their work, but it is an outrage that the profession should be made the target for all the shafts of injustice that may be hurled against it, leading to threatened or actual suits for damages for alleged malpractice.

The injustice of this spectre, in whatever form, should be opposed by all reputable physicians with a solid front of opposition. By united effort only, can communities be made to appreciate the power of our influence in creating sentiment distinctly hostile to any movement that might savor of a damage suit for malpractice. I am convinced that if this stand were taken, it would reduce this menace to an irreducible minimum.

With one or two exceptions, in recent years the doctors throughout the state have been free from attack, but be assured you are vulnerable to attack and no one can safely visualize what the future may hold out for him. Until public sentiment has reached the point referred to, and until it realizes that it is unpopular to mulct the doctor, your only safety lies in insurance.

This association should urge protection and be ready to assist in every possible way in the defense of its members when threatened by the pest that seeks damages for alleged malpractice.

The House of Delegates should appoint an active committee on medical defense at once. This committee should establish rules for the defense of the members of the association and investigate and report at an early date on the several plans now available for insurance.

In conclusion, time and space do not permit presenting, for your consideration, the subjects of newspaper publicity, periodic health examinations, and public health programs. I believe, however, enough has been given to indicate to you that there is much work that should have immediate attention, and may I bespeak for our incoming officers a continuance of that fine spirit of co-operation, so manifest during the past year, in sustaining and supporting them in every effort they may put forth on behalf of our association. Your officers will need that support, and, again, you owe it to organized medicine to give it.

The past year has been, indeed, an enjoyable one, nothwithstanding the time-consuming schedule laid out by ourselves at the beginning. New acquaintances have been formed, new view points obtained, and deeper friendships created. These will be cherished and will linger long in my memory as the years slip by.

Members of the Association, for the honor you have conferred upon me, I extend to you my sincere thanks.

THE
JOURNAL-LANCET
Represents the Medical Profession of
Minnesota, North Dakota, South Dakota and Montana
The Official Journal of the
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The Hennepin County Medical Society
The Soo Railway Surgical Association
and The Sioux Valley Medical Association

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NEWS ITEMS

Dr. D. G. Colp, of Robbinsdale, Minn., has returned from a three months visit in Europe.

The Inter-State Post Graduate Assembly meets in Atlanta, Ga., on October 15-16, 1928.

St. Barnabas Hospital, of Minneapolis, is to have an addition to its building that will cost over $500,000.

Dr. Russell H. Frost, of Wabasha, Minn., was married last month to Miss Katherine Cashman, of Owatonna.

Dr. D. L. Dahl has moved from Becker, Minn., to Minneapolis, and is now located at 2630 East 25th St.

The danger from rabies in Minnesota has practically passed, and dogs are now no longer muzzled in Minneapolis.

The contract has been let for an addition to the Northern Pacific Hospital at Glendive, Mont., to cost about $100,000.

Dr. Emil Geist, of Minneapolis, who has been ill for an extended period, has completely recovered his health and is keeping regular office hours.

Dr. J. D. Jungman, formerly of Philadelphia, has joined the North Dakota State Board of Health as head of the Bureau of Communicable Diseases.

The 1928 sale of Christmas Seals promises to be the greatest sale of this kind yet held, and this is because of the use made of the funds raised by the sale of seals which has impressed the public so favorably.

Dr. W. M. Boothby, of the Mayo Clinic, has gone to Europe for two months. He will present two papers before sections of the Medical Society of Sweden, and will visit also in England, France and Germany.

Dr. A. M. Cattanach, of Superior, Wis., well-known to Northern Minnesota physicians, died last month at the age of 69. Dr. Cattanach was educated at McGill and Edinburg, and was a pioneer at the head of the Lakes.

Physicians of the States of Montana, Idaho, and Wyoming met at Yellowstone Park the last days in August in a tri-state meeting. Papers were presented by distinguished men from East and West, and it was agreed that a similar joint meeting should be held in 1933.

The Ancker (City) Hospital, of St. Paul, has resolved to settle the question of free or pay patients in that institution. Dr. F. G. Carter, Supt., will investigate the financial standing of every patient, and act according to such condition of each.

The carillon tower of the new Clinic building at Rochester with its "singing bells" installed was dedicated last month, and there will be no further formal opening of this handsome and spacious building soon to be completed. The carillon was the gift of Drs. W. J. and C. H. Mayo.

The Association of Resident and Ex-Resident Physicians of the Mayo Clinic and the Mayo Foundation held its annual meeting this week in Rochester. The attendance was large, and a number of nationally known men presented papers. The program of papers and clinics was an exceedingly attractive one.

Plans have been made to give the students in the rural schools of North Dakota a new course in health education. This will be done through the co-operation of the W. C. T. U., of the superintendents and instructors of schools and teachers' colleges, and the State department of instruction.

The Cass County Medical Society gave Dr. John H. Rindlaub, of Fargo, a farewell dinner last month upon the occasion of his leaving the city to reside in California; and Dr. Albert Hallenberg, formerly associated with Dr. Rindlaub on the Fargo Clinic staff, also gave a banquet in his honor.

Dr. George L. Atkins, of Jackson, Minn., died on September 12 at the age of 52. Dr. Atkins was a graduate of the State University of Iowa, College of Medicine, class of '05. He was a member of the Medical Corps of the U. S. Army in the World War, and was prominent in the civic and social life of his city.

At the annual meeting of the Montana State Medical Association held the last of August in Yellowstone Park the following officers were elected: President-elect, Dr. Edward M. Ganz, Judith Gap; president, Dr. Alfred Karsted, Butte; secretary, Dr. Elmer G. Balsam, Billings. The next annual meeting will be held in Great Falls.

At a meeting of the Minnesota Academy of Medicine, held on September 12, 1928, at the Town and Country Club, the following officers were elected for 1928-29: President, Dr. C. Naumann McCloud, St. Paul; vice-president, Dr. Gustav Schwyzer, Minneapolis; secretary-treasurer, Dr. Carl B. Drake, St. Paul, (re-elected).

Eight counties in Southwestern Minnesota have organized a rehabilitation and placement service to assist former sanatorium patients. The service will be directed by Mr. R. R. Rosell, formerly doing like work with the Hennepin County Tuberculosis Association, and in co-operation with Dr. S. A. Slater, Supt. of the S. W. Minnesota Tuberculosis Sanatorium.

Apparatus for Sale

A 24-plate Bertman Static and X-ray machine complete for $75.00. Write P. O. Box 623, Fargo, North Dakota.

Experienced Technician Wants Work

Have had large experience in office work; in giving physiotherapy; and in *x*-ray work under a high-grade man. Address 518, care of this office.

Locum Tenens Wanted

For ten days in a general and surgical practice in a small hospital, starting November 7. Address Dr. H. O. Halgren, Watertown, Minn., or this office.

Small Hospital for Sale

A fine, small, all modern hospital and general practice in a prosperous community in Minnesota are offered for sale. Address 531, care of this office.

For Sale

One Fisher Diathermy. Costs $625. Will sell for $400. Just as good as new. Send check and I will send diatherma F. O. B. your town. J. L. Waldmer, M.D., Parkston, S. D.

Partner Wanted

Doctor would like partner, German preferred. Capable of doing surgery in country hospital. Half interest in practice, hospital, and real estate. $10,000, with privilege of buying all in a year or so. Address 532, care of this office.

Opening for Doctor

A good doctor is wanted to take over a well-equipped hospital. Large territory. No other hospital within 35 miles. Must be a good doctor and have some money. There is work enough for two doctors. Don't write, but come at once. Robert E. S. Snell, Pine River, Minn.

Locum Tenens Work Wanted

Have completed most of my senior work including full time in General Medicine, Gastrointestinal and Surgery, both in the University of Minnesota Dispensary and University and General Hospitals. My personality and appearance will satisfy the most critical. Age 24. Address 529, care of this office.

Physician Wanted

A physician is wanted to take over a practice in a prosperous Minnesota agricultural community. Town of 800 and with one other physician. Should net at least $5,000 cash annually. Scandinavian preferred. Address 524, care of this office.

Good Opening for a Doctor

Good location for a doctor. Can be appointed health officer with sufficient salary to pay office and house rent. No other doctor in the County at this time. Address Robert Dunn, County Attorney, Center, N. D.

Dentist Wanted

Location in semiresidence section, Minneapolis. Present occupant successful, leaving to take additional schooling. Joint waiting room with doctor. Operating and work rooms, and rent is only $37.50, heated. Entirely modern, of course. Available November 1. Address E. E. Playman, 519 Marquette Ave., Minneapolis.

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RECENT ADVANCES IN OUR KNOWLEDGE OF THE LIVER IN HEALTH AND DISEASE*

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In medicine the viewpoint is constantly changing, because of new observations, new facts, new ideas, new doctrines, new practices; and thus a new medicine evolves. It is fortunate that the viewpoint does change. It leads us to progress. Witness the advance from the vague humoral theories of the ancients to the clean-cut cellular pathology of Virchow. Since Virchow's time, however, pathology has dominated the field of medicine. This is not altogether desirable, since pathology deals largely with the dead whereas we as physicians are concerned with the living. We are now in an era of functional study. The purpose of cells and organs is function. Function is deranged in disease. Hence, if we are to deal intelligently with disease, we must understand the function of organs in health and also in disease. Claude Bernard in his day actually foresaw how medicine must develop and insisted that understanding of disease must rest on familiarity with normal function.

It is interesting to see how slowly by contrast our knowledge of function does develop, even our knowledge of normal function. Thus, the suprarenal glands were discovered and described in the early days of the Renaissance, in 1563 by Eustachius, but the first inkling we had of their true function came through the clinical studies of Addison, published in 1855. The heart was the object of interest to all anatomists throughout all time. Aristotle studied the embryonic heart of the chick, yet the knowledge of the heart's function in relation to circulation was not recognized until 1628 by Harvey. The kidneys have been known from earliest times. The Greeks believed that the urine was secreted through invisible pores into the bladder, while Galen claimed that the urine was secreted by the kidneys and carried to the bladder by the ureters. He actually outlined clean-cut experiments which proved his contention beyond question, yet in his day few were sufficiently interested in scientific proof either to try his experiments or to accept his evidence. One hundred years ago Bright centered medical attention on the kidney. During the last two decades considerable progress has been made in the study of the kidney in disease through the medium of tests of renal function and of studies of the chemistry of the blood. It is now possible to determine the functional impairment of the kidney in disease with a fair degree of accuracy. This represents true progress of the type which is urgently needed in relation to other organs in disease.

The liver likewise has been known throughout the entire history of medicine. Jaundice was clearly recognized in the dim distant days even before the dawn of medical history. Bile was a matter of much discussion between Hippocrates and his contemporaries. Galen recognized that the bilirubin was formed elsewhere in the body and was simply removed as such from the circulation by the liver. Yet today we know but little concerning the many functions of the liver, and in clinical work we are devoid of functional tests of value except in relation to its excretory or biliary function.

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*Presented at the Forty-first Annual Meeting of the North Dakota State Medical Association, held at Devils Lake, N. D., May 23 and 24, 1928.

I wish to center attention on some of the recent studies on the liver, many of which have been carried on as group investigations by various members of the staff of The Mayo Clinic.

The following is an outline of the better known functions of the liver:

I. General metabolic properties.
    A. Nitrogen metabolism (nitrogen partition in blood and urine).
    B. Carbohydrate metabolism.
        1. Blood sugar level.
        2. Carbohydrate tolerance tests (glucose, galactose, and levulose).
    C. Fat metabolism.
        1. Blood fats (hemokonia).
II. Formation and excretion of bile.
    A. Bilirubin metabolism (skin color, blood, urine, stools, and duodenal contents).
    B. Bile salt metabolism (blood, urine, and bile contents).
    C. Cholesterol metabolism (blood and bile).
    D. Calcium (blood and bile).
III. Excretion of dyes.
    A. Phenoltetrachlorphthalein (blood, urine, bile, and stools).
    B. Bromsulphalein.
    C. Rose bengal.
    D. Tetrabromphenolphthalein (cholecystography).
IV. Detoxification (hippuric acid synthesis).
V. Ferments and ferment activity (fibrinolytic ferments).
VI. Changes in blood accompanying disease of the liver.
    A. Coagulation time.
    B. Fibrinogen.
    C. Fragility of erythrocytes.

Proof of certain theories relative to the functions of the liver has been presented in a very convincing way through the recent experiments of Mann and his associates as the result of their studies on hepatectomized dogs. Thus, hypoglycemia develops, associated with toxemia characterized by convulsions which may be relieved temporarily by glucose. There is a decrease in deamidization, with decreased urea in the blood and urine and an increase of uric acid in the blood. There is also a retention of serum bilirubin, an indirect van den Bergh reaction and the development of jaundice. Although all these effects had been recognized in one way or another, satisfactory proof was lacking in many respects prior to these studies.

The attempts to employ functional tests in the study of the metabolic functions of the liver in hepatic disease have been disappointing. Although deviations from the normal can unquestionably be shown in individual instances from time to time, functional tests have never proved of any great clinical value. The progress in relation to carbohydrates is greater than that relating to proteins and fats. At the present time, however, tests relating to the metabolic function of the liver can be safely dismissed as of little or no real clinical significance.

In relation to the excretory function of the liver the excretion of dyes has proved of considerable value. The excretion of phenoltetrachlorphthalein by the liver was used originally. The rate of its disappearance from the blood, as advocated by Rosenthal, has great clinical significance. Bromsulphalein and tetrachlorphthalein are now being used interchangeably. In some respects bromsulphalein probably has slight advantages.

The level of serum bilirubin is determined as the bile index or by means of the van den Bergh reaction. They are important in a determination of the extent of retention of serum bilirubin. The van den Bergh test may also throw some light on the nature and cause of this retention. The direct reaction, obtained directly on the mixing of the reagent with the serum, is found most frequently in obstructive jaundice; the indirect reaction, apparent only after the addition of alcohol to the foregoing mixture, is commonly seen in hemolytic jaundice. The quantitative figures obtained in the van den Bergh reaction are of definite value in a determination of the degree of jaundice. While it must be admitted that the van den Bergh reaction is not infallible in the differentiation of various types of jaundice, all who have used it extensively appreciate its real value.

Little is yet known concerning the bile acids in the blood in either health or disease. The

Pettenkofer reaction for bile acids was shown to be nonspecific and consequently has never been employed to any great extent in clinical medicine. During the last few years, however, Aldrich, working in our medical laboratory, has standardized this reaction in such a way as to make it clinically applicable. The method is simple and has been used in 3,000 to 4,000 cases clinically and experimentally. In order to understand the rôle of the bile acids of the blood in disease, it is necessary to obtain an experimental background from studies on animals. Consequently two members of our staff, Greene and Snell, have introduced bile acids continuously into the circulation of dogs by means of the Woodyatt pump, and have found that dogs will tolerate as much as 500 mg. for each kilogram of body weight and that these large amounts disappear from the blood stream almost completely within two hours. They have found that in experimental obstructive jaundice, the bile acids accumulate very rapidly in the blood, often reaching levels as high as five or six times normal. This condition is associated with marked increase in the concentration of the serum bilirubin in the blood and with the retention of dyes. During the course of days and weeks the bile-acid level in the blood fluctuates, but shows a tendency to return to normal more quickly than the serum bilirubin. Dye retention persists, however, throughout the animal's life. When administered by mouth to the normal animal, bile acids are readily absorbed from the gastro-intestinal tract and can be easily demonstrated in increased amount in the blood of the portal vein. They are quickly removed from the circulation by the liver, and there is rarely any evidence of increase in the level of bile acids in the peripheral venous blood. The injected bile acids are excreted by an increase in the quantity of bile rather than by an increase in their concentration. The total excretion of bile pigment is not influenced or is increased only to a very small degree. The administration of bile acids results in choleresis, or marked excretion of fluid through the biliary tree.

Clinically, the level of the bile acids in the blood is of importance, but probably less so than that of the serum bilirubin and the degree of dye retention. To date the most interesting facts brought out by the bile-acid studies have to do with the relation of bile acids to pruritus, bradycardia, and disturbances in coagulation. The French school has taught that pruritus and bradycardia are due to an increase in the bile acids in the circulation. Our studies to date seem to disprove this and would seem to indicate that a direct parallelism does not exist between the level of bile and acid and the degree of pruritus or bradycardia. Similarly, it has been impossible to relate the level of the bile acids directly to the changes in coagulation. In many instances hemorrhage, purpura, and the changes in coagulation have occurred after the bile acids had returned more or less to a normal level. This, however, needs considerable investigation since our studies on extracorporeal thrombosis have indicated that bile acids in vivo are capable of markedly retarding thrombosis in an extracorporeal loop.

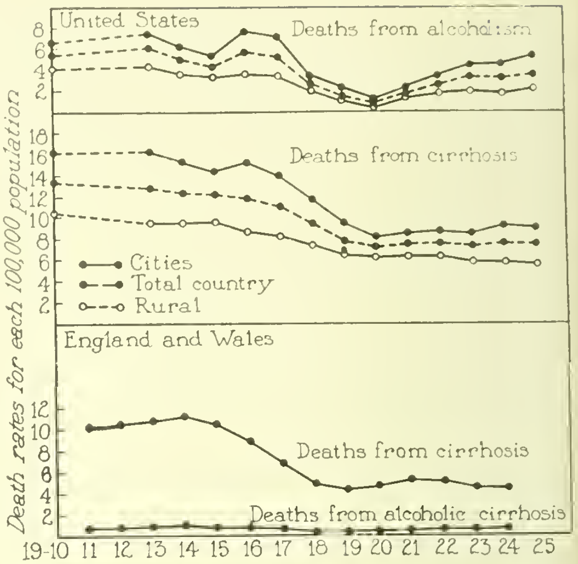
The fragility of the erythrocytes and the coagulation time of the blood are also of great clinical significance in disease of the liver. Although they are not in reality true functional tests of the liver, they are at least related in some respects to hepatic function and reveal information of importance in disease of the liver when considered in connection with the other functional tests.

The present status of the functional tests of the liver might be summed up in the following way. Serum bilirubin may be determined by the van den Bergh test or by the bile index. These studies are of particular value in the presence of jaundice and reveal the nature and the extent of the jaundice. The dye-retention tests with bromsulphalein and phenoltetrachlorphthalein are of very great clinical value in disease of the liver unaccompanied by jaundice. The bile salts in the blood are of less importance from the standpoint of diagnostic and prognostic indications Yet our studies on bile salts are perhaps most interesting of all from the standpoint of physiology. Obviously, the color of the skin and sclera, the white stool and the dark urine, and the time-honored routine determination of biliary products in the stool and urine are still of importance and not replaced in any way by the newer functional studies.

These tests are of value in practice, for diagnostically they reveal whether or not the liver is diseased; they reveal jaundice and its nature, that is, obstructive or hemolytic; they show the terminal picture common to several pathologic processes, aid in classifying hepatic diseases and are valuable in the differential diagnosis of ascites; prognostically they reveal the degree of hepatic insufficiency to some extent and are sometimes valuable in foretelling the course of disease; therapeutically they afford some indications for treatment, reveal the favorable time for operation in jaundiced patients, and tend to individualization in the treatment of hepatic disease. I believe we are safe in concluding that functional tests have already merited and established a permanent place in clinical medicine.

From the standpoint of anatomy the studies of McIndoe and Counseller have great significance. By means of celloidin injections of the vascular and biliary systems and the subsequent digestion of all parenchymous material, they have been able to obtain casts of the portal and hepatic vascular systems and also of the biliary system. Their work has demonstrated the bilateral nature of the liver, a matter of considerable clinical importance since it helps us to understand the basis for lesions confined to one or the other half of the liver. The extent of restriction of the portal circulation occurring in cirrhosis of the liver has been demonstrated visually. This carries great significance from the standpoint of its bearing on collateral circulation. The striking dilatation of the biliary system which accompanies obstructive jaundice has also been visualized and shown to be out of all proportion to that which we have been led to expect. This, obviously, has a direct bearing on the concomitant functional changes which are found in obstructive jaundice. Finally, the intertwining of the portal and biliary systems in their many branches has been emphasized, and this may be directly concerned in the development of mixed types of cirrhosis, which are so commonly found in the later stages of these diseases.

In relation to cirrhosis of the liver considerable progress has been made also in other directions. We have recently made some statistical studies which have a definite bearing on the relationship of alcohol to the etiology of portal cirrhosis. As you well know, clinicians have long contended that alcohol plays a very definite rôle in the etiology of cirrhosis, while many pathologists contend that this is not the case. Figure 1 presents the death rate from alcoholism and cirrhosis of the liver for each hundred thousand population in the United States and also for England and Wales, from 1910 to 1925, inclusive. These curves clearly indicate that the incidence of deaths from alcoholism and cirrhosis were materially affected through the restriction of alcohol consumption. The results in England, where the restriction was moderate, are almost as striking as in this country. It is possible that the restriction of food incident to the War is also playing some rôle. Figure 2 contrasts the striking effect in the state of New York in deaths from alcoholism and from cirrhosis during this period with the lack of change in the state of Kansas in which prohibition existed for some years prior to the Volstead Act. These curves would seem to yield incontrovertible evidence as to the importance of alcohol as a factor in cirrhosis of the liver.



LEGENDS

Fig. 1. Mortality from alcoholism and cirrhosis of the liver for the United States, and for cirrhosis of the liver and alcoholic cirrhosis of the liver for England and Wales.

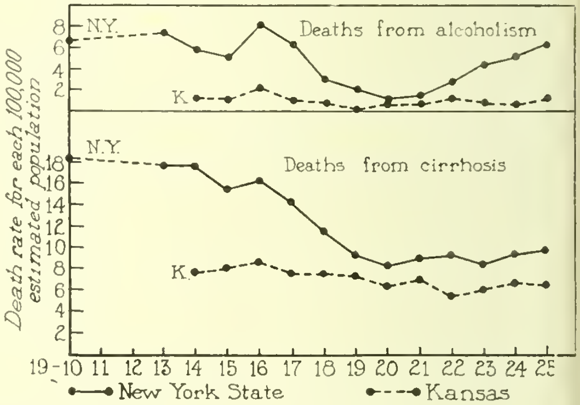


Fig. 2. Mortality from alcoholism and cirrhosis of the liver for the states of New York and Kansas.

Collateral circulation in portal cirrhosis may be very marked over the lumbar region posteriorly. In fact, in some instances it is more marked in this region than over the abdomen. Although this distribution of collateral channels is rare it is a clinical point worthy of consideration since it may have a direct bearing on the diagnosis. These collateral channels can be made more evident if the patient bends forward and strains as though at stool.

Ascites constitutes another clinical phenomenon of disease of the liver with which we are all familiar. The cause is not altogether clear. It has been difficult to produce ascites through disturbance in portal circulation. In fact, direct attempts to produce it along these lines have failed. However, in our dogs with complete biliary obstruction, ascites developed in several instances after the expiration of several months. The ascites has been striking in amount and necessitated tapping or the use of merbaphen. Bollman has recently shown that this ascites may be precipitated suddenly in such animals through the use of a meat diet.

The treatment of ascites has been considerably improved during the last few years through the use of merbaphen. At the beginning of our work merbaphen was looked on by most workers as a dangerous drug for use in disease of the liver. However, Keith and I have used it in a large series of cases with very happy results. The additional use of ammonium chloride or nitrate advocated by Keith has still further enhanced the value of merbaphen. At present, in a large proportion of cases of ascites due to cirrhosis of the liver, complete and lasting relief from ascites can be obtained in many instances. However, probably as many as half of the patients who are relieved of ascites are still in danger because of hemorrhage from esophageal varices. Anemia may demand repeated transfusions. Some method of anticipating and preventing hemorrhage from varices is urgently needed. In the late stages of cirrhosis of the liver and particularly in the presence of anemia and repeated hemorrhages, these newer diuretics are somewhat less effective.

Considerable progress has been made in the pre-operative preparation of patients with obstructive jaundice. The essential features as suggested by Walters are as follows: To prevent hemorrhage, blood-coagulation studies are carried out (Lee and White method), intravenous injections of calcium chloride (5 c.c. of 10 per cent solution daily for three days) are given and blood is transfused if prolonged coagulation time persists. Daily estimations of plasma icterus (van den Bergh test) are made, operation is avoided with rising jaundice and delayed with falling jaundice. To anticipate failure of hepatic function a high carbohydrate diet (3,000 calories) is given with avoidance of proteins. Three thousand to 4,000 c.c. of fluid is given daily to fill the tissues. To insure adequate renal function and to compensate for possible fluid loss by drainage of bile externally, 2 per cent glucose by proctoclysis (1,500 c.c. daily) is given. In severe prostration 1,000 c.c. of 10 per cent glucose solution intravenously is given. This procedure is life-saving and has markedly decreased the incidence of post-operative hemorrhage in patients with jaundice at The Mayo Clinic.

Finally, a word should be said concerning toxemia, which is frequently encountered following drainage of the biliary system. This is analogous in many respects to the uremia which is often encountered following the relief of back pressure in the kidney in cases of hypertrophy of the prostate gland. In both, the patients may become stuporous and the blood urea be found to be greatly elevated. The excretion of bile, as a rule, is markedly diminished, and there is nausea and vomiting. Under such conditions the administration intravenously of glucose or salt solution may prove of definite value in clearing up the toxemia, in establishing the flow of bile, and in decreasing the level of the blood urea. Water is probably an important factor in these results.

In closing, I wish to emphasize the extreme importance of the more careful investigation of disease of the liver from the standpoint of the history and general examination, as well as of the employment of special tests of function. When one considers the progress that has been made in the knowledge of function of certain other organs in disease, for instance the kidney, it is astounding how little we know concerning the liver. The study of function in disease is a clinical problem and belongs to the practitioner. The physiologists and the pathologists do not have access to clinical material and hence cannot furnish the necessary information. The study of function is our problem; only clinicians have the opportunity for this work, and hence the responsibility is ours and ours entirely. Not until we, as clinicians, accept this responsibility for the study of function in disease will we have made the best of our opportunities. Considerable progress has been made in the last decade in the knowledge of diseases of the liver, but the chief progress has probably come from a growing interest in the problems of the liver. This in itself will probably result in still greater progress.

DISCUSSION

Dr. W. H. Long (Fargo, N. D.): I think the one thing Dr. Rowntree did not do is to take the credit he justly deserves for the entire progress of the study of the function of the liver. In 1909 he and Dr. Abel were the men who brought out the phenoltetrachlorphthalein test to be used for liver function. This is the test, although dozens have been brought out, that has stood the test of time. A lot of the other tests may perhaps be useful, especially as we know more of the detoxication function of the liver and the amino-acids and their synthesis, but for the present the dye test is the best.

In 1914 Dr. Rowntree published a report of the clinical application of the various tests that had been introduced up to that time, which really crystalized opinion from the clinical standpoint, and which helped us a great deal. His studies of the function of the liver extend over many years. Certainly, we should not feel that the tests we are carrying out to-day are beyond the use of everyone, for some are so simple that anyone can carry them out, particularly the icterus index test, which is very simple and gives a much better idea of jaundice than merely a study of the skin.

Perhaps the next one that is but little more complicated, and probably the most valuable, is the van den Bergh test. As Dr. Rowntree said, in handling the obstructive jaundice cases this cannot be dispensed with if we once use it. It follows so closely the things that are happening, and the margin of safety as to when to operate and when not can be clearly defined. The dye test is probably not so much used by the men who see only a few cases, and for that I think the van den Bergh is the one more valuable than any other.

Certainly the pictures Dr. Rowntree showed of Dr. Counseller's work emphasized that everyone must be alive to the fact that repeated insult to the liver means a destroyed organ, just the same as any other, and cases of obstructive jaundice should not be allowed to go on with repeated insults until there is a condition from which the patient can never return entirely to normal.

I am glad Dr. Rowntree spoke of novasural, for I am sure this drug has not come into the general use which it deserves. We see many patients come into the hospital with extreme ascites and edema who have had a great many different kinds of treatment, but this one little thing has not been used. Last week we had a patient in with a tremendous edema who had been in the hospital four times, who had always cleared up by other means, and since her last hospital sojourn had been very well handled, but in spite of this the edema had increased markedly. We put her on ammonium chlorid on Saturday, and on Monday morning we gave her a dose of novasurol, with a most remarkable response. She passed 7,470 c.c. of urine in the twenty-four hours, and could not express her thanks for the great comfort which ensued.

I think everyone should use this method.

I wish to thank Dr. Rowntree for his paper, and for correlating for the rest of us the relationship between highly scientific studies and their practical value and uses. This correlation can be done only in such an institution as the one in which he works, where extensive laboratory work and research work go hand in hand with an unlimited clinical material.

Dr. Rowntree (closing): I tremendously appreciate the discussion by Dr. Long. I have known him for many years and have a high regard for his opinion.

He said one thing very well, namely, that functional tests cannot be dispensed with once you have used them. That tells its own story. As he also said, that scores of tests have been tried, but that I have given you only those which seem of value. Practice of to-day is based on research of yesterday.

One other thought I wish to leave with you: If we do not study function in disease ourselves who will make these studies for us? Who has the opportunity? We practitioners are the only individuals who have the opportunity of actually studying function in the presence of disease.

FOURTH MONTHLY CLINICAL CONFERENCE AT THE MINNEAPOLIS GENERAL HOSPITAL

Department of Obstetrics and Gynecology

April 24, 1928

C. O. Maland, M.D. M. S. Sichel, M.D.
J. H. Simons, M.D. F. L. Adair, M.D.

MINNEAPOLIS, MINNESOTA

By C. O. Maland, M.D.

1. *Postabortal salpingitis:* The operative indications and treatment. Report of a recently operated case with review of pathology involved.

The case is that of M. S., aged 22, single, Pregnancies: II. Admitted April 14, 1928.

P. C.—1. Pain in right side of lower abdomen, one month.

2. Vaginal discharge.

P. I.—Present illness dates to last June, 1927, when patient had an induced abortion at three months (took turpentine by mouth. Dose 1 tablespoonful q. day x 4 together with hot baths). Since then patient has had backache. Menstrual flow has been profuse since then, lasting 8-9 days as compared to 3-4 days previously. About one month ago (about March 15, 1928) patient began to have pain in right side. Occasionally felt nauseated and vomited. The pain began during her last menstrual period, March 23, 1928. Patient has had quite a profuse vaginal discharge, yellowish in color, during the past month. Has had only a slight discharge before. On June 25 a criminal abortion was performed and 48 hours later she aborted, accompanied with chills and fever. She was in bed one week and returned to work July 5.

P. H.—Negative.

F. H.—Mother died of tuberculosis.

Physical Exam.—Negative except for abdominal findings.

Abdomen—Striæ of pregnancy present. Slight tenderness in lower abdomen on palpation.

Pelvic Exam.—External genitalia negative. Perineum competent. Hymen ruptured. Bartholin's glands negative. No urethral discharge. There is a white homogeneous discharge from the vagina. The cervix has a slight bilateral laceration, slightly more marked on the left. The cervix is firm. The corpus is in anterior position, normal in size and shape, firm in consistency, and movable. In the left adnexal region there is a mass about 3-4 cm. in diameter, not very tender, and close to corpus. In the right adnexal region there is a larger mass tender to pressure, close to corpus and about 5-6 cm. in diameter. It extends from the uterus to the pelvic walls.

Diagnosis: 1. Bilateral salpingo-oöphoritis; 2. Bilateral ovarian cysts (Postabortal origin).

Pre-operative therapy: Rest in bed with expectant treatment for six days.

Operation: 1. Bilateral salpingectomy. 2. Right oöphorectomy. 3. Appendectomy.

Under general anesthesia a lower abdominal midline incision was made. The uterus was in good anterior position, normal size, slightly soft and boggy. Both tubes were enlarged, walls thickened, kinked, fimbriated extremities closed, and were typical of a chronic inflammatory reaction. On the right side there was an ovarian cyst about 6 cm. in diameter, which, on later opening, was found to contain hemorrhagic pseudomucinous fluid. The left ovary was not cystic. It was normal in size and not involved grossly in the pathologic process. Both tubes and the right ovary were removed. The appendix was about 4 inches in length. The lumen was distended with gas and contained several fecaliths. It was removed.

Final diagnosis: 1. Chronic bilateral salpingitis. 2. Right ovarian cyst. 3. Chronic appendicitis.

Postoperative course: Normal and uneventful. Patient now on fifth postoperative day.

A patient suffering from acute salpingitis should be treated by absolute rest in bed, hot vaginal douches, and ice cap to the lower abdomen. Codeine may be given to relieve pain. Cases in the acute stage should not be operated on until the acute symptoms subside, and the leukocyte count and temperature have been normal for a period of 6-10 days. There is one exception to operating in the acute stage of salpingitis, and that is the presence of a pelvic abscess. In such a case the abscess should be opened and drained. After a normal temperature and normal leukocyte count for 6-10 days, operation may be considered a fairly safe procedure.

Salpingitis of a postabortal origin is usually a streptococcic infection and is much more serious than that of gonorrheal origin. The infection remains virulent for a long period of time.

In operating upon these patients the menstrual function should be conserved if possible. In this patient, the left ovary was not removed. A subtotal hysterectomy is advisable if the inflammatory process is so extensive as to necessitate a bilateral salpingo-oöphorectomy.

By J. H. Simons, M.D.

2. *Tuberculosis and pregnancy:* Report of case of pulmonary tuberculosis in late pregnancy.

The case is that of C. B., aged 30, Para 0. Grav. 1

P. C.—Nausea and vomiting. Cough 4-5 months. No gain in weight during pregnancy. Tires easily. Weakness. Anorexia.

P. I.—Nausea and vomiting marked in first trimester.

Cessation of vomiting after fifth month. Weakness and vomiting again last week or ten days. Had "Flu" six weeks ago at which time she had cold sweats several nights and ever since has had night sweats and feels feverish afternoons and evenings—feels feverish particularly in early afternoon.

Cough for past 4-5 months, expectorating considerably. Weight gain during pregnancy not exceeding three pounds. Has no appetite.

F. H.—Husband in Walker Sanitarium; active case of tuberculosis.

Patient assumed entire care of husband for several months prior to his going to Walker.

Father died of carcinoma of stomach.

Mother died of heart trouble.

No history of tuberculosis except of the husband.

P. H.—Bronchitis and childhood diseases. Operation: amputation of right breast for a tumor.

Pregnancy: L. M. P. September 9, 1927. Due June 16-19, 1928. First trimester: nausea and vomiting. Second trimester: nausea and vomiting up to fifth month. Quickening Jan. Third trimester: as in P. I.

Physical Exam.: Patient fairly well nourished; face slightly flushed. Head and neck negative. Chest, small area of impaired resonance anteriorly in subclavicular region of left side. Few fine crackling râles left apex, and louder, coarse râles in right apex. No definite dullness or increased tactile fremitus. Expansion both chest walls slightly limited. Vocal fremitus normal. Scar of breast amputation on right side.

Heart: tones normal. B. P. 90/65.

Skin: moist and warm.

Remainder of examination negative.

Laboratory: 1. Sputum specimens negative for tubercle bacillus. 2. Urine negative. 3. Blood: Hgb. 84 per cent Sahli. R. B. C. 4,150,000. W. B. C. 10,200. P. M. Ns. 63 per cent. Lymph. 34 per cent. Eosinophil 3 per cent. Wassermann negative.

X-ray report: Calcified healed tubercle left subclavicular region and minimal infiltration into right apex with presence of definite fibroid subpleural scar. Appears to be old pulmonary tbc., which is probably quiescent although this should be ruled out by further observation and recheck in about four weeks.

Impression: Pulmonary tuberculosis., incipient; activity questionable.

Hospital course: 1. Temp. 99° afternoon of admission; normal following A. M. 100° afternoon of second day; 99° afternoon of third day; normal all of fourth day. 2. Pulse average between 90 and 100.

Increased susceptibility of a pregnant woman to tuberculosis is questionable. The added physiological strain of pregnancy would seem to invite infections especially in this patient, who was in persistent exposure for a number of months.

Tuberculosis does not influence pregnancy unfavorably to any marked degree, but many times, as one of the many complications, excessive vomiting occurs with result and deleterious effect upon the pregnancy and the infection.

The disastrous effects are more often developed in the puerperium and lactation period.

This case was not available for proper prenatal advice. With that, undoubtedly, the infection could have been prevented if, as history indicates, she received the infection from her husband. However, *x*-ray points toward chronicity.

Aside from general hygienic and dietary treatment interruption of pregnancy before the fifth month must be considered for the best interests of the mother. Extensive quiescent lesions, small active lesions, laryngeal involvement, excessive vomiting and renal insufficiency are absolute indications for interruption of pregnancy before the fifth month. Small quiescent lesions, in the absence of other complications, do not always indicate abortion, especially if the proper hygienic and dietary treatment can be instituted.

After the fifth month, generally speaking, little benefit will be gained by abortion.

The strain of labor should be shortened, and proper supervision instituted in the puerperium and lactation period.

By M. S. Sichel, M.D.

3. *Bicornate uterus:* Report of two cases of uterus bicornis unicollis encountered during obstetrical delivery and of one case of uterus septus unicollis found at operation.

Case 1.—The first case was a white married woman, aged 27; admitted to the Minneapolis General Hospital in the second stage of labor, on November 18, 1927. The past history with the exception of her pregnancies was negative. The menses were established at the age of 14, always regular, of the 28-day type, duration 5 days, and unaccompanied by pain. The date of the last menstrual period was February 6, 1927, with the expected date of confinement November 13, 1927. The present pregnancy had been entirely uneventful; there had been no prenatal care.

The patient's first pregnancy occurred in 1921, terminating in a premature seven months stillbirth, the pregnancy being complicated by eclampsia. The second pregnancy, in 1925, was normal, resulting in the spontaneous delivery of a normal healthy full term child. There were no complications of the third stage in either labor.

The patient was admitted after having been in active labor for fifteen hours. The membranes had been ruptured several hours, the cervix was completely dilated and effaced, an arm and a feebly pulsating umbilical cord were prolapsed. No fetal heart could be obtained, and the pulsation of the cord ceased in a few minutes. A diagnosis, of right scapular posterior position complicated by prolapse of an arm and the cord, was made. A podalic version and extraction of a 4,645 gram stillborn baby measuring 56 cm. crown-heel was then done under ether anesthesia.

The placenta did not separate in the usual half hour, and Credé expression was unsuccessful. At this time the two halves of a bicornate uterus could easily be palpated through the abdominal wall. Two hours after delivery of the baby the pulse had risen to 140, and the blood pressure dropped to 78/50. Under anesthesia a manual removal of the placenta was then easily done. The two uterine horns were easily distinguished with the gloved hand, each horn presenting a separated hollow cavity. There was no definite septum between, the separation apparently being maintained by an invagination of the uterine wall in the midportion of the fundus. The placenta was attached to the horn and wall of the left side; the right horn was smooth and entirely empty. The uterus immediately contracted, and bleeding ceased following the removal of the placenta. The placenta weighed 550 grams; the cord measured 90 cm. in length and was eccentrically attached.

The patient was treated for hemorrhage; there was no shock. Eight hours later the pulse was 94, the blood pressure 114/78, and the general condition satisfactory.

On the second day there was a chill, the temperature rose to 104,° and the pulse to 130. The patient then went through a markedly febrile reaction with the temperature ranging between 99°-104,° the pulse 90-140, and the W. B. C. 11,350-13,500. Treatment consisted of general supportive and stimulative measures, fluids, and two blood transfusions of 300 c.c. each. By the tenth day the temperature was normal and the convalescence was then rapid, the patient being discharged on the twenty-first day post-partum in good condition.

Three months after delivery the patient was examined and showed no signs of any residual pelvic inflammation. The uterus was completely involuted in first degree retroversion, and the two horns of a bicornate uterus could be made out.

A lipiodol injection of the uterus and tubes was then done and clearly demonstrated the bicornate uterus in the non-pregnant completely involuted state. With the canula in the right horn the lipiodol solution passed readily into the left horn. The right horn filled slightly better than the left. Both tubes were apparently occluded, the lipiodol failing to pass into the peritoneal cavity at three hours or twelve hours.

Case 2.—The second case was that of a primipara, aged 19, admitted June 18, 1927, in the first stage of labor. A spontaneous delivery of a normal full-term infant occurred after seventeen hours of labor. Profuse bleeding started soon after delivery, and the placenta could not be expressed by the Credé method. The hemorrhage soon became marked enough to become alarming. It was then necessary to resort to a manual removal of the placenta one hour after delivery. A bicornate uterus similar to that of Case I was then found. The placenta was attached along the right cornu and right uterine wall; it was easily removed.

There was a markedly febrile reaction for the first four days, recovery was otherwise normal and the patient was discharged on the fourteenth day post-operative. Examination at this time showed a fairly well involuted uterus in which two distinct horns could be outlined.

The congenital anomalies of the uterus are a relatively rare condition, and yet they are encountered sufficiently often to warrant their consideration. No doubt a great many cases go through life undiagnosed, some are not recognized until abdominal section is undertaken, while others become of importance during the course of an obstetrical delivery, often causing serious complications.

The most commonly recognized types of uterine malformation, according to the classification of Von Winkle, are as follows:

1. Uterus didelphys or duplex: a complete reduplication of parts with no connection between either side, that is a double uterus and double cervix associated either with a double or single vagina. Each half possesses only one tube and ovary. Pregnancy could then occur in either uterus entirely independent of the other.

2. Uterus bicornis: the two halves of the uterus are united to some extent in their lower portion but remain divided at the fundal portions into two distinct portions. There may be two distinct cervixes (uterus bicornis bicollis) or, as most commonly the case, one common cervix (uterus bicornis unicollis).

3. Uterus septus: a divided condition of the uterus into two distinct cavities often not recognized externally except by the unusual breadth of the fundus. When the septum reaches to the internal os, it is known as uterus subseptus unicollis; when the septum reaches only part way to the internal os, it is known as uterus subseptus unicollis.

4. Uterus unicollis: the development of only one horn of the uterus with the opposite tube and ovary missing or coming off the lower portion of the uterus. There is an intermediate type called uterus unicollis with a rudimentary horn, a type in which one horn is completely developed and the other incompletely or rudimentary and often closed off from the main uterine cavity.

5. Uterus fetalis, pubescens, rudimentarius, and defectus: underdeveloped and infantile type of uteri ranging to complete absence of the uterus.

By F. L. Adair, M.D.

4. *Extra-uterine pregnancy:* Report of two cases of ruptured extra-uterine pregnancy with pelvic hematocele. Death in one case due to general peritonitis of streptococcic origin.

Case 1.— J. W., aged 36, married, colored; admitted March 28, 1928. Pregnancies: 1916, normal delivery. 1918, twins. 1922, spontaneous breech delivery. 1923, normal delivery.

C. T. A.—Normal previous to present illness.

P. I.—Last normal menstrual period January 15, 1928. Missed period in February. On March 12th began to have pain in lower abdomen, cramplike, resembling labor pains. Vomited once at onset. Went to bed. Two days later, on March 14th, began to have vaginal bleeding and passed clots. Called a doctor when the pain began. Was given some medicine. In bed until admitted to hospital. On the day of admittance patient became acutely ill, weak, lips became pale, had hot flushes. Admitted to hospital in severe shock, apprehensive, hands and feet cold, perspiring profusely, mucous membranes pale, nauseated. Pulse 140. Temperature 97.6.° Blood pressure 70/60. Obese patient. Tenderness and rigidity in lower abdomen, especially on the right. Hgb. 73 per cent; W. B. C. 25,300; P. M. N. 90 per cent; Lymph. 10 per cent. Urine not examined during the first twelve hours. No urine on catheterization.

Immediate treatment: external heat; 3,000 c.c. fluids by hypodermoclysis and proctoclysis. Morphine, hot coffee enema, elevation of foot of bed.

Diagnostic possibilities: Acute surgical abdomen with pathology originating in right side of pelvis or right lower quadrant of abdomen. 1. Ruptured extra-uterine pregnancy. 2. Ruptured pyosalpinx. 3.

Ruptured gangrenous appendicitis. 4. Torsion of pedicle of ovarian cyst.

Course: Responded to shock treatment. Twelve hours after admission temperature was 104.4.° Pulse 120, markedly improved in quality. Patient nauseated with emesis. Only small amount of liquid material obtained on gastric lavage. Voided 300 c.c. Blood pressure 100/70. Marked tenderness within R. L. Q. Evidence of peritoneal irritation as evidenced by rebound tenderness. Tenderness to a less degree in R. U. Q. and L. L. Q. Marked muscular rigidity R. L. Q.

Pelvic examination (after reaction from shock. Small external hemorrhoids; old tear in perineum; posterior colpocele and rectocele; cervix displaced forward, points downward and backward; corpus movable, somewhat enlarged; posterior cul-de-sac filled with a tender mass somewhat elastic, seems to fluctuate, runs more toward right side. There seems to be a mass running off from the left uterine horn into the cul-de-sac mass. Whole lower abdomen tender. Upper limits of mass poorly defined.

Operative findings: Midline abdominal incision. Free blood in the form of dark clots in the pelvis. Mass in right adnexal region with intestines adherent. The mass consisted of the right tube and hematocele. The mass including the right tube was removed. Tissue was extremely friable. Closed in the usual manner without drainage. There was evidence of a previous chronic salpingitis of the left tube.

Post-operative course: Immediate post-operative condition good. On the morning of the following day, pulse was rapid, 150, weak, and thready. Temperature 102.° Blood pressure 110/70. No nausea. Abdomen slightly tender. No distention. Condition remained about the same until 6:00 P. M., after which blood pressure rapidly fell. Pulse 160, almost imperceptible. Slight generalized abdominal tenderness. Exitus at 11:55 P. M., thirty-eight hours after operation.

Post-mortem findings: Generalized fibrinopurulent streptococcic peritonitis, apparently primary in the pelvis; no free blood present.

Cause of death: 1. Post-operative peritonitis of streptococcic origin. 2. Generalized sepsis.

Laboratory findings: Urine normal. Wassermann negative. Coagulation time 4 minutes. Bleeding time 2 minutes.

Blood	3/27/28 9 P. M.	3/28/28 A. M.	3/29/28	3/31/28	4/1/28
Hgb	73%	55%	55%	53%	
R. B. C.	3.720,000	3,450,000	3,000,000	2,930,000	
W. B. C.	25,300	23,100	26,400	14,000	8,300
P. M. N's.	90%	85%	90%	86%	
Sed.. time	26 min.				29 min.

Case 2.—S. M., aged 34, housewife, admitted April 9, 1928.

Para 7; Grav. 9; two miscarriages, the first in 1920 at the sixth month; the second in 1923 at the third month.

P. C.—1. Vaginal bleeding, one month's duration. 2. Pain in lower abdomen, one month's duration. 3. weakness.

C. T. A.—Patient began to menstruate at sixteen years of age. Menstrual periods have been regular, 30 days interval between periods; periods 4-5 days in duration. Flow moderate; some pains cramplike in character in the lower abdomen during first few days of period. L. M. P. first week of March, 1928.

P. I.—Since the last menstrual period, patient has had vaginal bleeding daily and has experienced sharp intermittent pains in the lower abdomen. Patient has vomited frequently during the past month. She has had occasional headaches in this period.

P. H.—Essentially negative.

F. H.—Essentially negative.

Physical examination: Exclusive of pelvic examination was essentially negative. Blood pressure 120/76.

Pelvic examination: Labia majora, minora, prepuce, and clitoris all negative. Urethral meatus normal; no discharge. Skene's glands negative. No vaginal discharge. Vestibule, multiparous in character. Perineum showed a 2° old healed laceration. Competency fairly good. Vagina negative. Cervix showed previous Sturmdorf operation with good results. Cervix points downward and backward. Slight bluish discoloration of portio-vaginalis could be seen. Corpus anteflexed and anteverted, deviated toward left; size, form and consistency normal. Adnexa—an eliptical shaped mass was felt in the right adnexal region to the right and posterior to the cervix. Mass was smooth; walls firm, about 4-5 cm. in diameter. Mass tender, movable, and apparently not attached to the uterus. Impression of semifluctuation obtained. Left adnexa negative. On admission temperature 99° and pulse 78.

Blood—Hgb. 83 per cent; R. B. C. 4,490,000; W. B. C. 7,200; P. M. N. 65; Lymph. 31; Eosinophiles 3 per cent; basophiles 1 per cent.

Urine negative.

Sedimentation time: 3 hours and 33 minutes.

Pre-operative diagnostic possibilities and pre-operative therapy: 1. Possible extra-uterine pregnancy, right, unruptured. 2. Possible right salpingo-oöphoritis with right ovarian inflammatory cyst.

Treatment: 1. Expectant and observation for six days during which time the pulse and temperature were normal, slight lower abdominal pain continued, and vaginal bleeding was constant.

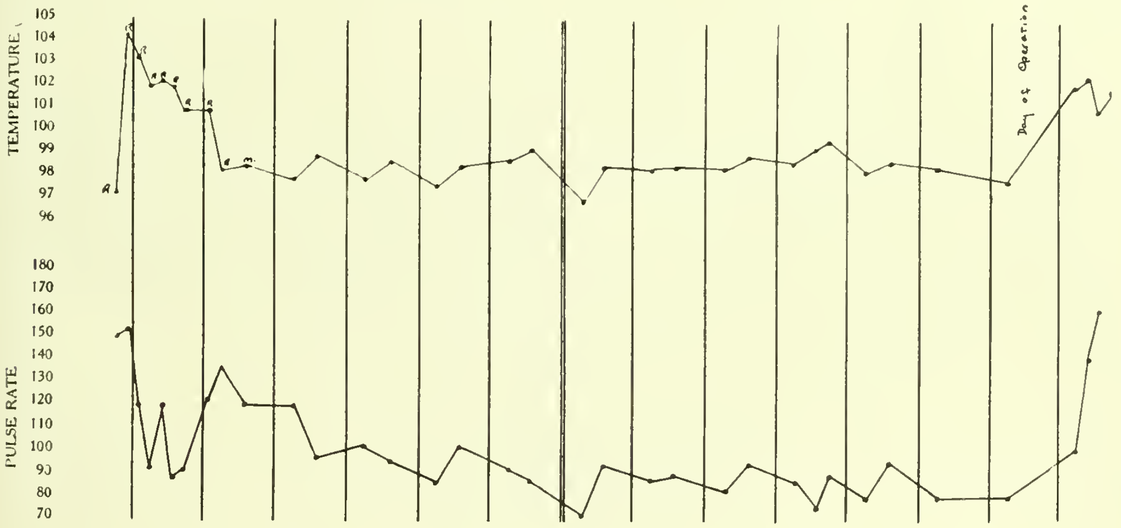
Operation and operative findings: Under general anesthesia with patient in Trendelenburg position, after usual iodine and alcohol preparation, the abdomen was opened with a lower midline incision. On opening abdomen, dark blood clots were seen occupying the right side of the pelvis and lower abdomen. The intestines were packed off, and a mass was found in the right adnexal region. This consisted of a pelvic hematocele surrounding the right tube. Site of rupture of the extra-uterine pregnancy was near the fimbriated end of the tube. No fetus was found. The blood clots were removed and the right tube resected. The remainder of the pelvic organs were normal. The abdomen was closed without drainage.

Post-operative diagnosis: 1. Extra-uterine pregnancy, right, ruptured. 2. Pelvic hematocle.

Post-operative course: Normal and uneventful; patient now on the eighth day post-operative.

Ectopic pregnancy is always a subject of interest. It frequently presents problems in differential diagnosis and often requires emergency management.

Case 1 presented considerable difficulty in establishing a diagnosis. This patient came into the hospital in a serious condition with a subnormal temperature, which rose rapidly and presented aspects of acute infection. The patient improved definitely after admission, the temperature and pulse both falling. The blood pressure also improved so that it was decided to wait before operating. After running a slightly febrile temperature for a number of days, a probable diagnosis of tubal pregnancy was established. Her condition was quite good at the time of operation which presented no special difficulties in its performance. The patient stood the operation well, and immediate post-operative condition was good. She rapidly developed signs of peritonitis and died one and one-half days after operation with a streptococcic infection. In view of the rapid course of this infection, it seems fair to presume that she may have had an infected hematoma at the time of operation. The clinical course and blood findings prior to operation would seem to confirm this opinion. A short sedimentation time would also substantiate this idea. It is quite possible that this patient might have recovered without operation, or had the operation been delayed for a long period of time. It is also possible that prompt operation on admission to the hospital might have resulted more favorably but the fact that she had a high fever with a very high leukocyte count would indicate that she was already infected at the time of admission. It is more than likely that if she had entered the hospital with the onset of her symptoms some two weeks prior to admission that the result would have been much more favorable. The temperature and pulse curves are shown in the chart herewith.



Case 2 also presented some difficulty in diagnosis. The history, while suggestive, was not conclusive. The patient entered the hospital in good condition. Physical findings were unimportant except for the palpation of a tender movable mass in the right adnexal region. The patient had no fever and her blood pressure was normal and blood findings were normal. Sedimentation time was prolonged. A pre-operative diagnosis of extra-uterine pregnancy was made, and the patient was observed for several days prior to operation.

The diagnostic points in this case were the slight vaginal bleeding with intermittent pains in the lower abdomen, associated with some vomiting. On physical examination a palpable, tender, movable mass in the right adnexal region was of considerable importance in establishing the diagnosis. There was no pre-operative evidence of infection in this case. The operative procedure was uncomplicated and confirmed the diagnosis. The patient made a good recovery.

These two cases are quite different in their histories and clinical course. They illustrate strikingly that cases of tubal pregnancy do not conform to any set type and that each case has to be considered and studied as an individual case and conclusions based on accurate interpretation of histories, physical and laboratory findings.

PROCEEDINGS OF THE MINNESOTA ACADEMY OF MEDICINE

Meeting of May 9, 1928

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town and Country Club on Wednesday evening, May 9, 1928. Dinner was served at 7 P. M. and the meeting was called to order at 8 P. M. by the President, Dr. John E. Hynes. There were 30 members and 3 visitors present.

Minutes of the April meeting were read and approved.

Dr. Colvin (St. Paul) read the following memorial on the life of Dr. J. G. Cross, and a motion was carried that this be spread upon the minutes of the Academy.

Dr. John Grosvenor Cross was born in Rochester, Minnesota, 57 years ago, and died March 3, 1928.

He was graduated from the University of Minnesota in 1892 and from the Northwestern Medical School in 1895. After the usual year of hospital internship in Chicago, he settled in Rochester, Minnesota, being associated in practice with his father. He remained in Rochester about seven years.

His desire for the knowledge, which later in life made him valuable to his patients, took him to Europe in 1902, where he spent two years of clinical observation and study. His wife, who had been his constant companion during his college life, accompanied him with their three small children. His determination to spend these years in study added another student of medicine to the large number of earnest young men from America who were eager to add to their knowledge by contact with the teachers of renown and experience in another country.

On his return he settled in Minneapolis, where the remainder of his life was spent. Here he soon obtained a large following of devoted friends and patients. During the twenty-four years of practice in Minneapolis, although ranking as an internist, his interest in sick people took him much beyond the limits of office and hospital practice. He was a real physician at heart and felt a kindly personal interest in his patients, which endeared him to so many of them. Nothing was allowed to interfere with his sense of duty in his life's work. It was his constant effort to practice medicine on a very high plane of scientific endeavor both in his clinical approach and in laboratory methods, and he most happily combined in proper proportion these two great interrelated features of medicine. Combining thus internal medicine, so called, with a larger knowledge and experience of many other aspects of practice, he exemplified a medical character which in the present transition of our professional life fills now, and perhaps always will fill, a great part in the contact between suffering human beings and the medical profession.

He was not much given to writing papers on medical subjects, but when he did write his papers bore the impress of an earnest studious nature.

He was meticulous in the ethics of medicine and believed that they played a very important part in the life of a practitioner of medicine. Certainly it was pleasant to meet him on this plane.

Endowed with a natural dignity, there was combined a sense of humor and wit. He was unsurpassed as a teller of stories, and had a famous repertoire. These attractive characteristics, combined with a most honorable, high-minded manner of thinking and living, made him an inspiration to all who came in contact with him. His kindly generous attitude to younger men was a further evidence of his fine nature.

John Grosvenor Cross will be remembered long by those who knew him best.

Dr. A. T. Mann, Chairman
Dr. Geo. Douglas Head
Dr. A. R. Colvin

Dr. Hilding Berglund (Minneapolis) reported a case of pneumonia with a peculiar lung condition following the pneumonia.

DISCUSSION

Dr. A. Schwyzer: I wonder if this could not be an infarct. That would explain the fluid in the chest and the bloody expectoration. It depends on the degree of infection and the nearness of the process to the surface whether the pleura is affected little or much. I remember a case where there was a slough of the whole middle lobe of the right side with an empyema totale. In another milder case it would not have to go so far and a serous exudate would occur.

Dr. S. M. White: Was drainage kept up for some time?

Dr. Berglund: No, it was not; only for one day, then it went down to a very small amount.

Dr. White: Was the sputum watched for a considerable length of time for fibres? If infected for that long a time, one would be likely to get gangrene.

Dr. Berglund: It could not be an abscess formation because we were watching for elastic fibres but did not find any.

Dr. Frank Burch (St. Paul) reported a case of cystic hemangioma of the upper eyelid in a little girl, and also a heart case with optic involvement.

Dr. Arnold Schwyzer (St. Paul) reported the following case:

I want to report a case we operated on this morning. The patient, a woman, had had headaches for a long time and two years ago suffered from what was considered an apoplectic stroke. She was unconscious, foamed from the mouth, and the next day it was noticed that she could not see. She seemed blind in the left eye and almost totally blind for two weeks in both eyes, according to her sister's statement. She was then treated a long time for severe headaches, and up to now had used headache remedies without intermission every day.

After a year she consulted Dr. Binger, of St. Paul, for her eyes. The *x*-ray showed a tumor of the hypophysis area reaching far above the sella turcica. On account of this large size and the inaccessible location, *x*-ray treatments were given which for a time seemed to improve the sight. Of late the improvement was lost again and the pain in the head became worse.

Dr. Binger then kindly referred the case to me, though I advised him to turn the case over to somebody with more experience in this field. This same proposition was made to the patient's relatives; but they asked me to operate, and I, probably somewhat rashly, promised to study the case and see what could be done. The examination which I made showed that the left opticus was entirely white, the right one also showed a white atrophy, perhaps not quite so severe. In pituitary growths there is a bitemporal hemianopsia. The tumor bulges in front of the chiasma of the optic nerves and pushes the nerves sideways. The inner fibres are therefore more and earlier affected. They lead to the nasal areas of the retina and thus cause temporal amblyopia which gradually increases. In our case, when the right eye was examined, the moving hand was not seen when coming from the outer field until it reached the midline. From there on nasally it was well seen, though at best the patient could see fingers at two feet. On the left eye we noticed something surprising. When we moved the hand over the nasal field, the patient did not have any perception of it. As soon as we reached the midline she recognized a motion and in the lateral field she also had some perception of this motion.

In other words, the left half of each retina was amaurotic.

Now if you remember that only the inner half of the retinal fibers cross to the other side in the chiasma, while the fibers coming from the outer half of the retina remain uncrossed, you will see that this finding speaks for an injury to the left tractus opticus behind the chiasma, where the left outer and the right inner retinal supply runs. But in addition we had found that the whole left eye was nearly blind. A pressure from the left side of the chiasma which would compress the left side of the chiasma together with perhaps the left optic nerve and the left tractus opticus, would explain our findings perfectly.

A stereoscopic roentgen picture showed the tumor, which was the size of a walnut but somewhat oblong vertically, to rise from behind the left anterior clinoid process and reach vertically upward. It was definitely not in the midline. But what was it? While studying all this, the husband of the patient, on whom I had operated a few months ago for a tumor of the cerebellopontile angle (and whose case I reported to you) dropped in to the office and reported that his wife had gained twenty-five pounds and that her eyesight had returned so that she was reading books and newspapers "all day long," and that she could again walk somewhat without assistance. This made us more ready to undertake the operation of this tumor of the left suprasellar area. As a guide for the approach, we had Adson's article on intracranial operation of hypophyseal tumors, to be found in the "Supplementary Volume of Keen's Surgery." It is a jewel of American surgical literature,—clear, excellently illustrated, and fascinating. (Blackboard diagram of operation was given. X-ray films were shown.) A large parietal craniotomy was made on the right side, though the tumor was to the left of the midline, because we did not want to disturb the motor center of speech. The frontal brain was lifted up and gradually, very gradually, the brain was allowed to mold itself so that the orbital roof, crista galli, etc., became visible. Then the tumor was found to be an aneurysm. Nothing further was done; the wound was closed. The whole operation was done in local anesthesia.

Note: Twelve days after this operation we ligated the common carotid artery, also in local anesthesia. Twelve days after this second operation she went home. The patient is emphatic in her statement that the headache and pain in the right jaw is gone and that she is better "in every way." The vision is not much improved so far; perhaps the time is too short; however, fingers were counted at five feet when she left the hospital.

Dr. A. E. Benjamin (Minneapolis) read a paper on "Primary Amenorrhea, with report of a case of Uterine Leiomyomata and Ovarian Fibrosis." (Specimen shown.)

DISCUSSION

Dr. J. L. Rothrock: It seems to me that the explanation of this case is that there was, to start with, a rather high degree of hypoplasia and that the ovaries did not function; perhaps there were very few primordial follicles. There may have been a hypoplasia of the uterus with deficient endometrium. It has been shown that amenorrhea does not preclude fibroids of the uterus. A great many authorities think a hyperplasia of the uterus makes it more susceptible to tumors. A. Mayer says that 30 per cent of carcinomata of the uterus occur in women who never menstruated until after sixteen, indicating hypoplasia. We are apt to associate the development of the tumors with a large vascular uterus, but that does not always obtain. We often have difficulty in making a diagnosis between pregnancy and tumor associated with amenorrhea. I once saw a case of abdominal tumor, and when I had the abdomen open I did not know whether or not it was pregnancy. It proved to be a soft fibroid.

I recall another very unusual case. The patient never menstruated but once in her life, and she recently gave birth to a child. She is now about 22 years of age. I also recall another patient who, at the age of 45, ceased menstruating for one year. She consulted me because of pain in the abdomen. I found what proved to be a 4-months' pregnancy; she went on to term and was delivered of a living child.

It seems to me the most likely explanation of this case is from hypoplasia of the organs, and later a fibroid developed in the uterus.

Dr. Benjamin: I have nothing special to add. This was a rather atypical case. Here was a woman with a uterus fairly well-developed; the uterine cavity with no endometrium. This tumor must have begun to grow early in life.

Owing to the absence of Dr. Wm. Lerche, his report of a "Case of Hodgkin's Disease of the Neck and Mediastinum" was not read.

Carl B. Drake, M.D.
Secretary

PHYSICIANS' LIABILITIES*

By Harry Whipple
Attorney at Law
MONTICELLO, MINNESOTA

I have been requested to prepare a paper upon the subject of physicians' liability, and I must confess that it is rather difficult to know just what may be said upon this subject that will be of interest or value to the medical society. Presumably, all licensed practitioners are more or less familiar with the law of medical jurisprudence and no doubt all are familiar with the liability which every practitioner is subjected to; however, I will endeavor to submit, briefly, a few statements concerning the matter with the hope that the same will meet with your approval.

In considering the question of liability it seems to me that we should also consider the matter of assets, because if a physician or surgeon is possessed of all the valuable assets of his particular medical school he certainly will be in a position to minimize his liabilities. In other words, if a physican or surgeon is well grounded and qualified in his profession he certainly will avoid those things which are going to jeopardize himself, his profession, or his standing as a physician or surgeon; and, on the other hand, if he is lacking in some of the essential qualifications he is very apt to jeopardize himself, in addition to his professional standing. Of course, there are other very valuable requisites of every physician and surgeon, such as character and habits. These latter are very important because they have a very direct bearing upon the liabilities and risks which every physician is susceptible to. If a man is of good moral character and free from vices his dangers are considerably less than those of one who may be otherwise.

I am thinking of the subject of malpractice. A skillful physician or surgeon, one who is well versed in the theory of his profession and a man of good habits and character, is practically free from charges of malpractice, but one who is careless or does not understand what he undertakes to do or who possibly may be addicted to the use of liquor or narcotics, is very apt to run into trouble from time to time as a result of his thoughtlessness.

The subject of malpractice may be divided into three parts, namely: willful malpractice, negligent malpractice, and ignorant malpractice. Under the first subdivision are cases where a physician purposely administers medicine or performs operations which he knows and expects will result in damage of some sort, great or small. Negligent malpractice includes those cases where there is no criminal or dishonest motive but gross negligence of that attention which the patient requires, as, for instance, if a physician administers medicine while in the state of intoxication. Ignorant malpractice is the administration of medicines which are calculated to do good, but which do harm and which a well-educated and scientific medical man would know were not proper in the case.

Professional men, be they physicians, surgeons, dentists, or what not, by holding themselves out to the world as being qualified in their profession impliedly contract that they possess the reasonable and ordinary qualifications of their profession and are under a duty to exercise reasonable and ordinary care, skill, and diligence, but that is the extent of their liability. The care, skill, and diligence required by physicians and surgeons is such as are ordinarily used by custom and practice in the same general neighborhood, in the same general line of practice. No physician or surgeon guarantees a cure except by special contract. This may be done and often is done, but in the absence of any express agreement a physician is bound to exercise reasonable and ordinary care. The law does not favor any particular school of medicine, and the treatment of the physician is to be tested by the principles of the school to which he belongs.

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*Presented before the Wright County Medical Society, at Buffalo, Minn., April 5, 1928.

Physicians and surgeons should keep abreast of the times and make use of the latest and most improved methods and appliances, having regard to the locality and general practice of the profession, and a departure from approved methods, resulting in injury to the patient, will render the medical practitioner liable, however honest the intention and expectation of benefit to the patient may be.

A physician is bound to give his patients the benefit of his best judgment, skill, and experience, but cannot be held liable for a mere error of judgment, unless such error is of so gross a nature as to be inconsistent with reasonable care, skill, and diligence. The fact that the service rendered by a physician may possibly be gratuitous does not affect his liability or change in any way his duty to exercise reasonable care and prudence.

In addition to the civil liability for damages for malpractice there is also, of course, the criminal side of the matter, and I believe that most physicians are well posted upon the criminal laws of this state pertaining to their duties and obligations and that it will not be necessary to enter into a discussion of the criminal aspects of the matter; suffice it to say that in no cases will a physician or surgeon be held criminally responsible except in the grossest case of ignorance or criminal inattention or willful intention to commit a crime.

In closing these brief statements I beg to call attention to the fact that while ordinary care, skill, and diligence are all that is required of a physician or surgeon in a given case yet we all know from personal experience and observation that the tendency of the medical men to-day is to render *extraordinary* care, skill, and service in every case and not to be satisfied in the fact that they have merely performed their duty, but to perform their duty and obligation to their patients in such a way as to preclude any thought or claim that the very highest degree of care and skill was not used in a given case.

This being the age of progress in all lines, and in none greater than in medical research and investigation, the members of the profession are in a position to render the highest type of service to suffering humanity, and are doing so, and the day is rapidly passing away when it can be said of a physician or surgeon that he was careless, negligent, intoxicated, or ignorant of his profession. True, there are isolated cases of malpractice preferred, oftentimes without merit, but on the whole this sort of litigation is not desired and oftentimes bears no fruit to the litigants. There are very few medical men nowadays who cannot establish a pretty strong case showing due care and skill in all their work.

It is otherwise, of course, where willful malpractice enters into the case, and in cases of this kind the accused is usually lacking in some of the essential assets herein referred to. So, in conclusion, if a physician or surgeon has the required amount of assets consisting of a thorough education in his profession, a good moral character, and good habits, he ought to be able to reduce his liability to the slightest degree.

MEDICAL ECONOMICS AND THE COUNTRY DOCTOR

By A. J. Henderson, M.D.

KIESTER, MINNESOTA

Our profession has been referred to as the "healing art" or the "science of medicine." However, our code of ethics makes us hesitate at discussing the "business of being a doctor." It is my contention that if we were better "business men" we would also be "better physicians." Most physicians keep very meager records, either of their case histories and treatment prescribed, or financially and otherwise. The excuse may be that they see no reason for so doing or that they have no time for the additional amount of book-keeping which it requires. However, it is my opinion that it can be done with great advantage to the physician.

Almost every physician having an average size practice will find it convenient and helpful, as well as economical, to employ an office assistant. This need not be a graduate nurse, a trained book-keeper or stenographer. A young lady having a reasonable education and adaptability may be trained for this purpose.

Her duties should be, first, the care of the office, second, the keeping of the physicians books; third, assisting him in certain parts of his professional work. She should see that the office is kept clean, well arranged and comfortable.

The oft' neglected waiting room should be made attractive, and supplied with *recent* periodicals including *Hygeia* and the Minnesota health journals. She will do the minor laboratory work, replace instruments and dressings after their use, assist the doctor in minor operations and dressings, and accompany him on his obstetrical calls. She should answer telephone calls courteously, securing the name and address of the party calling, at the same time attempting to secure a brief report as to the condition or illness for which the doctor is called.

Every practitioner can and should adopt a simple but systematic method of keeping records. This should include both case histories and the treatment prescribed, as well as the charges and payments made. For this purpose the McCaskey, Witmer, or similar systems will be found practicable. The unit should be a small sheet of paper of a size suitable for filing, having printed headings. I have modified the forms supplied by these houses in a way which suits my requirements. (See Fig. 1.) I use a green slip for all copies of prescriptions, a pink slip for urine analyses reports, and the McCaskey blank for obstetrical cases. It is comparatively easy, if done each day, to make each record complete, putting down the chief complaint, a brief history, the physical findings, and tentative diagnosis, together with the treatment suggested. Incidentally, if the typewriter is used a neat and more complete record can be made.

In connection with the above it seems to me very helpful and practicable to combine a daily journal. One page is set aside for each day. The name of every patient at the office, as well as those seen at homes, should be entered, including the exact hour of the day. This journal may serve as a diary by recording other events of importance. Although this might seem nonessential, yet it is conceivable that some future contingency may arise at which time it may be very helpful to have an exact record of these things.

The matter of posting is quite simple. The charges and credits for each day are added and posted to the Monthly Summary Blank, the slips being placed in the open file under the proper names, so that the accounts are always brought up to date. As paid they are filed away for future reference. These records are very important, not only medico-legally but also as a matter of convenience when, for example, some patient returns subsequently for treatment or perhaps for such a simple thing as a "refill" of a certain prescription.

It seems to me that it is good business to send monthly statements. Of course there will be some people to whom one cannot send statements without offending them. The book accounts, if properly posted, will always be up to date so that whenever an individual asks for the amount of his account, the doctor may receive what is due him. Of course there are a few accounts which cannot be collected by merely sending statements. A personal call for this purpose should be made within a reasonable time. If this avails naught, it is advisable to hand the account to a reputable attorney. My records show that for the past few years my actual losses have not exceeded five per cent of my total professional income.

An expense ledger is necessary to conduct one's private affairs in due form. This may consist of two sections, the one for expenses incidental to the conduct of the profession, the other for private and family expenses. There should be separate pages set aside for automobile expenses, taxes, interest, insurance, medical supplies and dressings, rent, and the like, as well as for the bank with which one does business, the latter showing at a glance the balance on deposit. It is practicable to pay all bills with checks which should then be posted to this ledger.

Incidentally, a physician should strive to maintain a good reputation as a business man. He should not overdraw his account at the bank. He should pay his bills promptly when due. He should know at the end of the year, not only his gross professional income, but by means of the summary of his expense ledger he may easily calculate his net income.

At the end of each year it is well to make a survey of one's business and professional work. By means of this expense ledger it is comparatively easy to make out a statement of receipts and disbursements, as well as a statement of resources and liabilities. Our banks like to see a statement of this sort, and it is conceivable that this, in itself, may facilitate obtaining credit in certain contemplated transactions. It is also helpful in making out the Income Tax report, as well as a personal satisfaction to see the results of the year's work.

Again at the end of the year one may make out charts for various purposes, showing the number of calls made, etc., (See Fig. 3). One may be interested in certain work, as, for example, fractures, and by the use of a proper system of filing it will be comparatively easy to write a paper for the medical society or otherwise.

CONCLUSIONS

1. It is convenient, if not essential, in this day and age for a country physician to keep complete professional and financial records.
2. This helps to cultivate the habit of accuracy which cannot be overestimated when medicine is approaching an "exact science."
3. An office assistant is as necessary in the practice of medicine as other professional equipment.
4. One should adopt a simple but complete system of records and adhere to it faithfully.
5. An annual complete statement should and can be made by the doctor, as well as by any other business man.

Figure 1

|| Bal.
No. || Paid
Date || Total
Age... Nat. Occup... S. M. W. || Chg.
Visit Off... Med... Self. Wife.. Son.. Dau. || For'd
Temp. Pulse Resp. B. P.
App. Sleep. Bowel Men.
Urine
Diagnosis
Services to
Sun... Mon... Tue... Wed... Thu. Fri... Sat... A. M. P. M.

Figure 2

|| Bal.
No. || Paid
Date || Total
Age... Nat. Occup.. S. M. W. || Chg.
Visit Off... Med... Self... Wife... Son Dau. || For'd
Temp. Pulse Resp. B. P.
App. Sleep Bowel Men.
Urine
Sp. Gr. Reaction
Color Appearance
Odor Albumen
Heat & Acetic
HNO3 Ring Test
Sugar
Haines Test
Benedicts
Quantitative
Acetone, Indican, etc.
Microscope.
Sediment
Stained
Diagnosis
Services to
Sun.. Mon.. Tue... Wed.. Thu.. Fri... Sat. A. M. P. M.

Figure 3

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Office Patients	142	241	260	258	195	262	180	259	203	197	199	155	2,653
Town Calls	7	51	16	19	15	18	6	2	7	11	4	7	163
Country Calls	34	49	57	27	26	22	19	20	18	19	21	28	340
Total Calls	41	100	73	46	41	40	25	22	25	30	25	35	503
Phone Calls	34	24	47	11	7	8	6	10	29	13	24	34	247
Insurance Exam.	4	5	3	3	2	14	9	5	4	4	0	6	59
Obstetrical Cases	5	3	10	4	4	4	2	7	4	4	4	4	55
Premature Labors	0	1	0	1	0	1	0	0	0	0	0	0	3
Tonsillectomies	0	0	0	2	1	3	2	0	1	1	1	0	11
Fractures	0	0	0	0	1	1	0	2	0	3	1	2	10

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CUSTOMS, OLD AND NEW

"Custom doth lie upon us with a weight," not always proportional to the load it gives us to lift, but rather to the length of time over which we have to carry it. Sometimes the hoarier a custom the more burdensome it grows. Tennyson warned his age, shackled as it was in centuried habits, "lest some good custom should corrupt the world." Not one, but many, of them did.

The worst of it is that in our ultimate revolt against custom we often reveal so many ugly things,—the pre-hidden consequences of long-established custom within ourselves.

The medical profession is at the present time the victim of certain time-worn customs and the victim, also, of the dread of doing away with them. We are a peculiar people, fearful of change. We love the well-trodden ways. And so, under the inertia of old habit, we continue to endure "the ills we have, than fly to others that we know not of."

It will be only a question of time, though, before some of these old customs of ours,—customs of ethics, customs in our relations with our fellows, which are good neither for them nor for us; customs in our relations with the public which disfavor us in its eyes; customs limiting the freedom of medical education will be abandoned or definitely modified.

At one point of medical economics we believe a change might be brought about very easily and to the benefit both of the profession and the public. It may be frankly stated.

Medical service rendered by the medical profession to the public should be publicly and appropriately rewarded. There are precedents for this thesis. There is no very certain precedent against it.

Medically and scientifically trained teachers who devote their entire time to education and research are, of course, salaried. Medical superintendents of hospitals are paid. Medical internes and residents are given room and board and frequently a stipend. Medical health officers are fairly well remunerated. Practicing physicians who attend the medical, surgical, and special services of hospitals and dispensary clinics, who give their daily, semiweekly, or triweekly time, out of their busily occupied hours, to the treatment of the sick who are a public or a partially public charge, in institutions supported by public taxation, are very inadequately rewarded or, in most instances, are not paid at all.

The thing is a manifest injustice to the medical profession. There is no satisfactory quid pro quo to this public service.

Observe the point, that it *is* public service, provided under public taxation to which these physicians contribute their civic share. *They* are not tax-exempt. It is a service to which, on all accounts, they should be appointed upon a business basis. In other countries and in parts of our own, this public obligation is respected.

Sir Arthur Newsholme, recently Chief Medical Officer of England and Wales, calls attention to the fact, and the justice of the fact, that medical attendance upon all government clinics there is always suitably paid for. And it ought to be!

The arrangement would work well on both sides. It would carry with it the expectation of a definite time service, of a recognized quality of service. It would be a matter of good understanding and of better feeling than it is now. It would confer upon these appointments a greater dignity.

On the other hand it would justify physicians, in justice to themselves, in rendering a fair and generous measure of free service to those types of medical and public health work which are supported by private funds, in which their help is often greatly needed.

Until very recently they have always done this without question. Many of them are doing it freely and gladly still. Of late there has arisen a very general protest against any extension of free medical and health service. The effect of this has been to put the medical profession, and very unfairly, in an unfortunate light, to subject it, in fact, to the suggestion of illiberality.

As a matter of custom and practice medical men and women do a degree of unrewarded service which no other profession than theirs even approaches. They have always been honored, and have earned the honor, in the doing of it, and they should be honored still.

True, they have not always proved as discriminative of the merits of free service which would serve the health interests of all the people as they might be. They have not always been sufficiently far-sighted to see that in the end the promotion of the public health promotes the financial health of the doctor.

It would be an excellent thing for the profession of medicine to set the pace of progress in public health developments, to the support of which, after a period of demonstration, public and private funds might be given.

The very last thing it behooves any of us to do is to draw a sharp line of distinction,—an altogether impossible thing for anyone to do,—between the so-called deserving and undeserving poor—practically obsolete terms,—or, to put it better, between those who are on the borderline of economic dependence and those who are pushed across it by sickness.

Intelligence and economy in affording free help may be exercised; but that spirit of largesse in social service should prevail which ruled the life of Him who continually and unreservedly gave and gave again Himself,—that spirit which makes of human need the test of human service; and for us in these days makes the end of human betterment the goal of all our effort.

THE PRINCIPLE OF SELECTION AMONG MEDICAL STUDENTS

Medical educators are agreed that the spirit of the new College of Liberal Arts has not yet spread to the medical school. That it eventually will is conditioned upon the fact that such a movement, as among humans, is contagious; that it has in it the viability of a growth principle; that the academic college has become the avenue of approach to an education in medicine.

So much by way of prophecy of its coming. What of the process by which it may come?

Some years ago two or three attempts at the evolution of freedom in medical training were initiated at the University of Minnesota. They failed. Perhaps they were premature of birth, even though they were well conceived. Perhaps the time for their borning, even though they were delivered at full term, was not favorable to their subsequent nutrition. Perhaps the food material upon which they were fed was not well chosen or well prepared. Perhaps it was too strong meat for medical babes. Anyhow, these young fledglings of effort did not get far in their flight.

Among them was the advanced senior student, who, if he made a sufficiently good record during his first three years, was permitted to select specialized studies in the remainder of the course and to begin his internship ahead of his group. He did not last very long.

Then followed the junior internship student, who in the second half of his senior year was transferred to hospital residence and became an interne apprentice. He ended up in the dark suspicion that he was fagging for the senior internes without adequate guidance and was cutting his regular senior courses at the University. Presently the baby internship was replaced by a more serious departure, in the direction of freedom, from a prescribed curriculum. The candidate could apply for registration as a superior student, and if he maintained the assumption of his superiority for two and a half years of required work, he could thereafter go it alone and pick up the crumbs of medical knowledge that fell from the table of any master in the faculty with whom he chose to sit, provided he could subsequently prove by examination that he had acquired an adequate supply of medical information. But, somehow, he did not register for these unusual privileges. He remained in utero where he seemed to think he belonged. It was supposed that he did not care for freedom. In reality he simply refused to confess to his superiority, as any other red-blooded student would, until he had proved it. He could not travel with his class as one of the Lord's elect. Only one or two of him have tried to. The practical point of it is that the student does not yearn for freedom in educating himself upon an individual basis. He does not want to be free and enjoy it all alone. The idea was educationally sound, but psychologically sad.

Let the Medical School of the University of Minnesota try to solve the problem of enlarging the freedom and improving the results of medical education once more; but let it follow the master mind of Professor Meiklejohn, of the University of Wisconsin, in making the new attempt.

The medical freshman, or even the medical academic, is the subject with whom we may well begin, but it would be well for us to remember first of all that his is a gregarious age. He belongs in a group. Give him the opportunity of a new departure in medical education in the company of a volunteer and selectively approved group of his fellows. Provide for them a common place of residence where they will live and eat together, where they will study under selected leadership, and companioned by a friendly number of their younger teachers.

Probably the lower limit of the student group should be not less than twenty, in order to permit of due economy in the use of faculty members who should be carefully chosen for their novel task. Students and staff should together map out the method and material of study. They should be grouped for laboratory exercises. Didactic teaching should be replaced by conference work. Reading should be individually pursued. The group should be segregated for the mutual discussion of topics, to which each member should contribute his share.

In each successive year, room would be found for variation of system and for substitutions and additions of teaching leaders.

Perhaps one of the most valuable results of such an undertaking would be found in the opportunity it afforded for the selection and, perhaps, from time to time, for the elimination of students. Those who failed to fit into their new educational freedom might be referred back to the regular curriculum. Their places might be filled at any point in the entire course by those who had learned to covet the experience.

Surely there is need of the application of new principles of selection in the admission of students to medicine. The University of Minnesota has already won new laurels in the development of a scientific method of vocational study and guidance. There is need for its application in the professional schools. The sooner unfitness is discovered, the more readily and justly are readjustments made. The longer its discovery is postponed, the more difficultly and unfairly are exclusions determined.

There are four parties in interest to be considered: the student, who is destined to ultimate failure in practice, if not to educational disaster in his preparation for his calling; the school, which suffers in reputation for its too easy indulgences; the profession, which is already far too heavily encumbered with the unfit; the public, which suffers by misplaced confidence in the physician and in the ultimate sacrifice of health and life in the hands of the incompetent. The lines are already too dimly drawn between the inefficient under professional sanction and state license and the charlatan whose cleverness often compensates in public esteem for his lack of scientific knowledge and trained experience.

The diploma of the State should be a guarantee of character, intelligence, and training. It should serve as the safe dependence of the people in the selection of the physician.

HYPERTENSION

The prognosis of hypertension has been well treated by Louis Hamman in the *West Virginia Medical Journal* and abstracted in the *International Medical Digest.* When the editor approaches the question of hypertension he wonders whether he will get through with it and get away with it or not, or whether his ideas will be generaly rejected. Lately, of course, hypertension and influenza have been very closely associated, for some strange reason which no one has explained. And why some people have a hypertension in their younger days and a hypotension in their later lives is a debatable question, too.

It has been quite generally supposed that these queer cases of influenza that have run through the country and with their unusual chain of symptoms (notably the vertigo and other disorders, such as acute nephritis) are commonly associated with hypertension. But the editor is very skeptical about the condition of hypertension unless it is associated with something else that is equally grave, or, at least, something that is responsible for other disorders. A case is called to mind of a woman more than fifty years of age who evidently had a stroke of some kind. She had a monoplegia of her right arm and a typical aphasia, complete, so that she was unable to speak or express herself in any way; she was unable to use her right arm. These two symptoms were the only things she presented, yet it was accepted that she had had hypertension and a small cerebral hemorrhage in all probability—at least it seemed quite likely. She was seen again nine months later. She had recovered then from her aphasia and had recovered the movement of her arm. And in conformity with the usual examination, her blood pressure was taken, with other findings, and much to the astonishment of the examiner she was found to have a blood pressure of 340 mm., which is considered fairly high. The examiner lost faith at that moment in the value of the prognosis which hypertension brings about.

We realize this is no strict criterion of high blood pressure because we know perfectly well that a man who has a nephritis may have a hypertension associated with it which is the more important we must decide.

The woman cited in the case above lived for twelve years and enjoyed fairly good health without any special attention and she did not die of a recurring hemorrhage, but of some acute disorder.

It is rather unfortunate in some ways that high blood pressure occupies such a conspicuous place in the medical literature of the day, and a great many may still feel that blood pressure is a very important thing.

The editor recalls another case, that of a man who had a blood pressure of 146; he was 46 years of age, and using the old formula of 100 plus the age it gives one a fairly good estimate of his blood pressure. This man had been living a long time in very good health, yet many such patients are unduly frightened or anxious about their high blood pressure; and every little while we receive some new thing for blood pressure. But tranquility of mind is one thing that cannot be sold over a counter, or from the discoverer to the doctor or the patient. A calm state of mind, peace of mind, and absence of fear or worry would dismiss many so-called hypertension cases. However, people have been educated up to high blood pressure now, and we are obliged to change their minds. What difference does it make if a man is afflicted with high or low blood pressure provided he is in good, fair health and has the usual physiological arteriosclerosis. Even in these cases we are tempted at times to attribute minor troubles to their so-called hypertension.

The writer is also tempted to quote the case of a man who had some trouble—his doctor at the time did not know just what—eight years ago that was accompanied by a degree of vertigo which made it necessary for him to have an attendant. The man recovered from his trouble, whatever it was, and he has been well and free from vertigo for over eight years. What are we to believe? Do we know anything about hypertension or vertigo, or influenza and its associated disorders?

This editorial is written mainly to bring out a discussion as to the various things which may occur and which are sometimes grossly exaggerated as to their relative importance and appear as very active and violent disorders. Dr. Hamman suggests that hypertension is a symptom and not a disease and must be treated in a practical way, and sometimes the symptoms that follow it demand immediate recognition and prompt attention. He also gives a group report of 299 hypertensives of all ages observed for a period of two years or longer: 14 per cent died during the first two years, 44 per cent during the first five years, and 90 per cent during the first ten years.

The problem of hypertension with nephritis must not in any way be neglected. Some of these patients may have normal urine; another group may have a trace of albumin and a few casts, at times, but with no evidence of impaired renal function; a third group may have much albumin and many casts or a phthalein output of 30 per cent or under; and a fourth group may have a more marked impairment of renal function, fixation of specific gravity at a low level, and a low phthalein test. Dr. Hamman further states that 30 to 40 per cent of patients with hypertension die of heart failure. Perhaps that accounts for the numerous newspaper reports of deaths from heart disease—according to newspaper diagnosis. Consequently one must look carefully at the heart and consider its condition in all cases of hypertension. Yet when one comes to sum it all up, too much credence must not be given to the hypertension, or the heart, alone, if the muscles tone is good, or to an occasional disfunction of the kidneys.

BOOK NOTICES

The Medical Clinics of North America. (Issued serially, one number every other month.) Volume 11, Number 6 (Mayo Clinic Number, May, 1928). Octavo of 330 pages with 89 illustrations and complete Index to Volume 11. Per clinic year, July, 1927, to May, 1928. Paper, $12.00; cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company.

This is the Mayo number and, as usual, is of extreme interest and full of good material. Gastric disease is discussed in a number of papers, both from the clinical and roentgenological aspect. A paper on "Renal Disease" and one on "Vascular Disease" are very well presented. All of the papers in the volume reflect the ability of the authors and any attempt to discuss them at length in this review would be amiss. The volume is one that should have the consideration of all medical men.

—A. E. Cardle, M.D.

The Medical Clinics of North America. (Issued serially, one number every other month.) Volume 11, Number 4, (Brooklyn Number, January, 1928). Octavo of 277 pages with 53 illustrations. Per clinic year, July, 1927 to May, 1928. Paper, $12.00; cloth, $16.00 net. Philadelphia and London: W. B. Saunders Compnay.

This is a very good volume, presenting a variety of interesting subjects. Of particular interest were the papers on heart disease, one of which is by Dr. Chas. Shookhoff on "The Tachycardias" and another by Dr. Frank Bethel Cross on "The Clinical Types of Cardiac Failure." Dr. M. C. Myerson discusses "Bronchoscopy in the Treatment of Lung Suppuration." All of the other papers are of a similarly interesting character and the volume is very well worth reading.

—A. E. Cardle, M.D.

First Aid and Medical Service in Industry. Compiled from a survey by Johnson & Johnson, New Brunswick, N. J., 1928. Forty-three illustrations; one hundred thirty-six pages.

This book is an extremely interesting condensation taken from a survey of the medical service in the principal industries of the United States. It shows how important industries protect the health of their employees, whether sick or well, executive or laborer.

This book contains a great deal of valuable information for industrial surgeons, as well as for men in general practice.

—John A. Dahl, M.D.

NEWS ITEMS

Dr. W. C. Nolte has moved from Jamestown, N. D., to Nampha, Idaho.

Dr. N. O. Dalager has moved from Willow City, N. D., to Minot, N. D.

Dr. O. V. Johnson has moved from Sebeka, Minn., to Fergus Falls, Minn.

Dr. J. P. Hawkinson has moved from Kensington, Minn., to Crosby, Minn.

The Stutsman County Clinic of Jamestown, N. D., will be discontinued on November 1.

Minneapolis and St. Paul have again ordered their dogs muzzled because of fear of rabies.

Dr. H. E. Kellogg, of Madison, S. D., has decided to locate in San Pedro, Calif., near Los Angeles.

Dr. A. D. Hirschfelder, wife, and two children, of Minneapolis, have returned from a tour in Europe.

Dr. C. C. Rasmussen, of Farmington, Minn., has purchased the practice of Dr. O. O. Larsen, of Fertile, Minn.

Dr. Charles T. Granger, located at Rochester, Minn., for many years, has opened a clinic and hospital at McGregor, Minn.

Dr. Charles N. Hensel, of St. Paul, has returned from a summer trip in Europe. He was accompanied by his wife, son, and daughter.

Dr. H. B. Wentz, of Fairmount, N. D., has received the appointment of Superintendent of the Wisconsin State Prison Hospital at Waupun, Wis.

Dr. Roland G. Scherer, of Winthrop, Minn., has taken over the practice of Dr. J. L. Adams, of Morgan, Minn., who will retire from practice.

Dr. R. J. Murray, of Fort Pierre, S. D., accompanied by his wife, has gone to Vienna for a six-months' course in eye, ear, nose, and throat work.

A community hospital is soon to be opened at Richardton, N. D. It will be in charge of Dr. A. J. Malerich, a recent graduate of the University of Minnesota.

Dr. L. L. Jones, Physician at the U. S. Government Hospital at Pine Ridge, S. D., has resigned his position and will take an extended trip through the country.

The success of the first health camp conducted by the Tuberculosis Association of North Dakota the past summer was so great as to demand a second camp next summer.

The physicians and surgeons of Sioux Falls, S. D., are giving hearty co-operation in the plan for a new and modern hospital in that city. The campaign for funds has been opened.

Dr. F. C. Shrubsall and his wife, also a physician, of the Department of Public Health of London, were in Minneapolis last week making a study of the city's child health work.

Dr. William DeKleine, former director of the Child Health Clinic at Fargo, N. D., has been appointed medical director of the American Red Cross with headquarters at Washington, D. C.

Dr. Christian Peterson, of Owatonna, Minn., died last month at the age of 71. Dr. Peterson was a graduate of the Illinois Medical College, class of '07, and had practiced in Owatonna forty-five years.

Minnesota ranks fifth in the United States in the number of nurse training pupils in her hospitals, being exceeded by only New York, Pennsylvania, Massachusetts, Ohio, and California. The showing is very remarkable.

The Lymanhurst Hospital of Minneapolis will not be closed for lack of funds as persistent rumors seem to indicate. Its work is too great, and its usefulness is too apparent, to permit the calamity such closure would cause.

The Washington County (Minn.) Medical Society held its annual meeting in Stillwater last month, when the following officers were elected: President, Dr. W. H. Pratt; vice-president, Dr. E. O. B. Freligh; secretary and treasurer, Dr. B. J. Merrill.

The annual meeting of the North Dakota Nurses Association will be held at Grand Forks, N. D., on November 1 and 2. Dr. H. E. French, Dean of the School of Medicine, University of North Dakota, will deliver the principal address on Wednesday.

Dr. W. C. Wilson, who was formerly a member of the firm of Drs. Witerstine, Wilson, Miller, and Hunt, of Grand Forks, N. D., died in Tacoma, Wash., last month. Dr. Wilson practiced twelve years in Grand Forks before moving to Tacoma.

The Third District Minnesota State Registered Nurses' Association celebrated its twenty-fifth anniversary last week at a dinner given at the Plaza Hotel, Minneapolis. The association was organized with a membership of 25 nurses, which number has grown to 1,100.

The cornerstone of the new Swedish Hospital building of Minneapolis was laid yesterday with appropriate ceremonies. Speeches were made by President Coffman, of the University; the Rev. E. O. Stone, of the Board of Trustees; and Dr. Soren P. Rees, Chief of the Staff of the Hospital.

The Mower County (Minnesota) Medical Society has passed a by-law prohibiting any member from "permitting his name to appear in print in connection with any patient, or in any other way unless sanctioned by the Mower County Medical Society." The two daily papers of the County ridicule the action.

Cambridge, Mass., with a population of 122,000, did not have a single death from diphtheria in 1927; Duluth, Minnesota, with a population of 100,000 did not have a single death from this cause in 1925. The number of deaths in either of these cities from diphtheria prior to 1894, when antitoxin was first employed, might have reached, normally, over 100.

The tenth reunion of the Resident and Ex-Resident physicians of the Mayo Clinic and the Mayo Foundation was held in Rochester last month with the largest attendance in the history of the association, whose membership contains representatives from almost every state in the Union. Dr. Gilbert J. Thomas, of Minneapolis, was elected president for the current year.

Dr. Everett C. Hartley, of Carver, Minn., died last month at the age of 72. Dr. Hartley graduated from the Bennett Medical College, Chicago, in the class of '77 and from the Northwestern University Medical School, of Chicago, in the class of '79. He was one of the pioneer physicians of the state, a country doctor greatly beloved by the community which he served so long and so faithfully.

A Minneapolis Unit of the Gorgas Health Corps has been formed. Its purpose is to advance preventive medicine and promote periodic health examinations. The following are officers of the local unit: President, Dr. C. B. Wright, Minneapolis; first vice-president, Mrs. W. H. Lee; secretary, Dr. Wm. C. Naegeli; treasurer, Dr. J. A. Myers, Minneapolis. Dr. Franklin Martin, of Chicago, is president of the Gorgas Memorial Institute at Washington, D. C.

The annual meeting of the Southern Minnesota Medical Association was held in Rochester last month. In attendance, the extent and variety of the program, and the interest in both papers and clinics suggested a State Association meeting. The following were elected officers for next year: President, Dr. E. M. McLaughlin, Winona; vice-president, Dr. E. S. Geist, Minneapolis; secretary, Dr. M. C. Piper, Rochester. The 1929 meeting will be held at Winona.

The Minnesota State Board of Medical Examiners has driven out of Minnesota the following persons who have been practicing in the state without licenses: Mrs. Emielie D. K. Evald, operating at Olivia; Robert G. Errington, operating at Bellingham; Charles Ross, alias R. J. Dietrich, operating at Pine River. The name of Dr. R. J. Dietrich, a reputable physician, now practicing in Kansas, was assumed by Ross. The end of such men attempting to practice in Minnesota is in sight. The new Basic Science Law and a vigorous Board of Medical Examiners armed with funds for prosecution are bringing about the good results.

The Mississippi Valley Conference for Tuberculosis held its twenty-fifth annual meeting in Des Moines, Iowa, last month and drew many physicians from Minnesota and the two Dakotas. Among its Council members are Miss Kathryne Radebaugh, of Minneapolis; Dr. E. A. Meyerding of St. Paul; and Dr. S. A. Slater, Superintendent of the Worthington (Minn.) Tuberculosis Sanatorium. Dr. J. W. Coon, Supt. of the River Pines (Wis.) Tuberculosis Sanatorium, was elected President; and Dr. T. J. Werle, of the Michigan Tuberculosis Association, was elected Executive Secretary for 1929.

Between thirty-five and forty doctors were present at the September meeting of the Aberdeen District Medical Society. A splendid program was presented. Dr. H. I. King, one of the members on the committee on organization of a physicians credit bureau stated that the committee had decided to use the Carpenter Collection Agency, and the society authorized the committee to close the deal. Dr. M. C. Johnston presented a copy of the revised fee bill and a motion was carried that the Secretary mail a copy to every member of the Society, final action to be taken at the next meeting. A $5.00 per capita assessment was also voted to the South Dakota State Medical Association for legislative fund. After the meeting lunch was enjoyed at the Virginia Cafe.—G. H. MAYER, M.D., Secretary.

Dr. Jay A. Myers, Associate Professor of Preventive Medicine and Public Health, University of Minnesota, will be the guest speaker at the 25th anniversary meeting of the Anti-Tuberculosis League of Cleveland, Ohio, to be held October 23. His subject will be "Tuberculosis Infection in Childhood," offering a discussion of the difficulties of diagnosis, prevention of, and incipient tuberculosis in, children. Dr. Myers will also address a special meeting of physical educators, nurses, and physicians of the public and parochial schools of Cleveland on the health of high school students. On October 23 Dr. Myers will give two addresses for the clinical program at the state meeting of the Illinois Tuberculosis and Public Health Association at Centralia. He will discuss "Tuberculosis Infection in Children" at the morning session, and in the afternoon "Tuberculosis in the Teen-Age."

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A 90-page illustrated booklet will be sent to any physician upon request, and correspondence is solicited upon the work of the institution.

AIDS IN DIAGNOSIS

The Pengelly X-Ray Company repeat on another page their announcement made in our issue of September 15 concerning the value of two aids in the oral method of cholecystography, which our leading roentgenologists have adopted.

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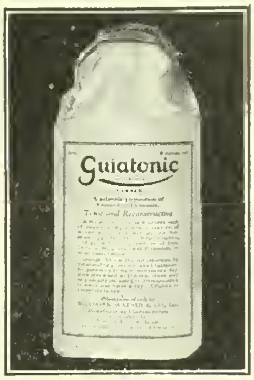

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A SEDATIVE OR A TONIC?

Lauder Brunton, in his "Lectures on the Action of Drugs," relates the case of a famous author who came to him for relief from insomnia. Brunton did not dare to give him bromides, or other similar sedatives, because he was in the midst of an important piece of literary work and drugs of this kind would have blunted his mental acuity. The great therapeutist decided that the man's nerves were irritable, not because his work was specially racking, but because the man himself was below par, and that if he could be brought up to normal his irritability would disappear. He therefore gave him a nerve tonic, with gratifying results.

Most cases of neurasthenia and so-called "nervous debility" have a physical basis. These patients' physical income is inadequate to the demands of living. They have no reserve, and live from hand to mouth. Hence their nervous irritability. Too often they are given sedatives and hypnotics when in truth they need a tonic—that is to say, a true tonic, not merely a whip but a reconstructant, which will supply the body with needed elements and promote nutrition. Thousands of physicians throughout the world have proven the efficacy of FELLOWS' SYRUP of the Hypophosphites in conditions of this kind. Brunton's experience illustrates a general therapeutic principle. Fellow's Syrup furnishes an agent for applying the principle.

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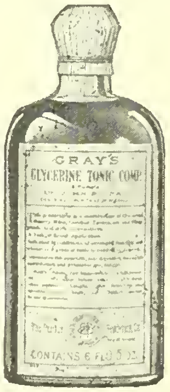

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New Series
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A Year, $2.00

PSEUDO-APPENDICITIS*

By Sir Henry M. W. Gray, LL.D., M.B.
Aberdeen; F.R.C.S., Edinburgh
MONTREAL, CANADA

Mr. President, Ladies and Gentlemen:

The title, "Pseudo-appendicitis," which has been selected for the subject of my contribution to your proceedings indicates that, in the opinion of those who chose the title, many mistakes are made when so-called chronic appendicitis is diagnosed and the appendix removed. These mistakes are revealed in the post-operative life of the patient and at a subsequent operation. Bad health and, indeed, definite suffering may actually be worse after operation when mere appendectomy is performed than before it. To my mind such a state of affairs is due to a want of appreciation of the factors which, in the vast majority of these cases, cause the ill-health and suffering. These factors lead to discomfort and possibly pain and tenderness in the right iliac region, a symptom-complex which is too widely regarded as being significant merely of inflammation of the appendix.

As we proceed you will appreciate the reasons why actual appendicitis is sometimes present and why some patients are permanently relieved by the procedures aimed at removal of the appendix alone. Such cures are brought about by the fortuitous removal of the original and chief predisposing cause of the appendicitis and the other disabilities which probably preceded it.

Extending over years, I have made a close, searching study of many hundreds of abdominal cavities, conducted through incisions long enough to allow unobstructed inspection, as well as free palpation. I have come to the conclusion that, associated with the conditions which cause the right iliac symptoms, there are others, in other parts of the abdomen, which may be large contributors to the ill-health of which the patient complains. The association is so frequent that I think it is futile to discuss the one without the others, if we are to consider how, especially by operation, we can more likely deliver a permanently uncomplaining soldier-citizen back to the battle of life. It is a bigger matter than mere appendicitis. I believe you will agree, therefore, that a more adequate title for my remarks would be "Developmental factors within the abdomen which may lead to disease."

In these sufferers from persistent developmental abnormalities, the assumption of the erect posture by man has not been adequately compensated for. Such sufferers would probably be healthy people if they, for a considerable part of their lives at least, walked "on all fours"!

I readily accepted the invitation to address you because, although the subject has been scoffed at in the past, I believe it will, in a few years, occupy a prominent position in the thoughts of professional men who strive to get at the root of things which concern their life's work.

The subject is now creating a steadily increasing interest throughout the world, and methods of treatment are being crystallized. As a result many patients previously classed as hypochondriacs, neurasthenics, and so forth, are being transformed into robust, healthy individuals.

The basis for intelligent, non-empirical treatment or even discussion of any trouble must include knowledge of its cause. It has gradually been forced upon me, and I hope you will appreciate the reasons later on, that the colon as a whole, and especially its proximal part, is probably the most important intra-abdominal organ from an etiological-pathological point of view. For this reason I present to you some lantern slides. (Demonstration of lantern slides.)

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*Read only in part, before the North Dakota State Medical Association, May 23, 1928.

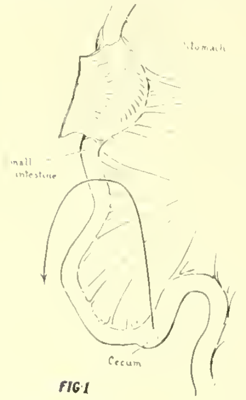

FIG 1

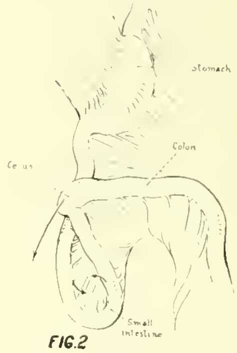

FIG.2

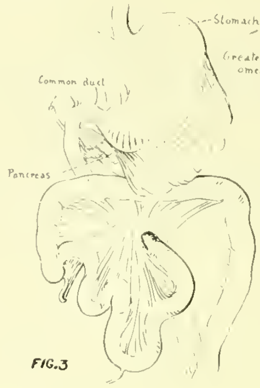

FIG.3

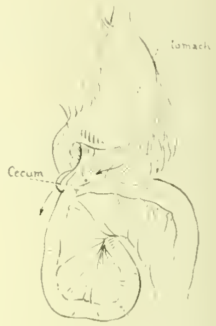

FIG.4

Figs.—1, 2, 3.—These tracings represent the formation of the "cecum" on the left side and its migration across the upper part of the abdomen, under the liver, and down to its permanent home in the right iliac fossa. It will be noted that the omentum is represented as being formed long after the cecum has passed by the stomach. (See Fig. 4).

Fig. 4.—Represents the condition found in a fetus stated to be of three months' development. The writer believes this to be the normal process of affairs—that the cecum usually "picks up" the right side of the already developing omentum and carries it across the abdomen, under the liver. Here the omentum, during the temporary check in the progress of the cecum, which occurs before it turns in a caudal direction, acquires adhesions, to the gallbladder, duodenum, under surface of the liver, and adjacent posterior abdominal wall.

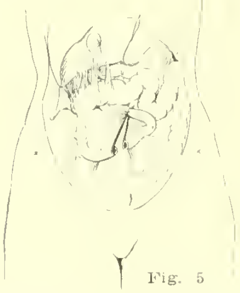

Fig. 5

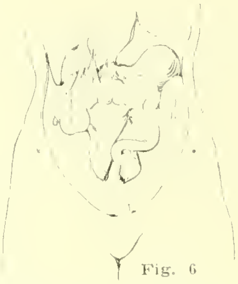

Fig. 6

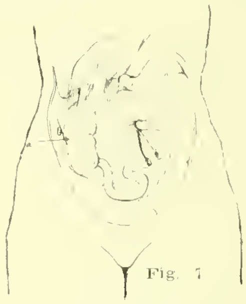

Fig. 7

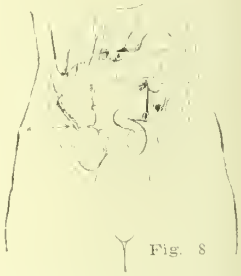

Fig. 8

Figs. 5, 6, 7, 8.—The cecum may not proceed further and is occasionally found up under the liver in adult life, when these subhepatic adhesions are usually very definite. If the temporary check in the progress of the cecum is prolonged, the subhepatic adhesions tend to become fortified and to persist, especially those binding the cecum and appendix to the posterior abdominal wall. During such a period, in absence of the proximal colon from its usual position, the distal or lower end of the ileum becomes adherent to the posterior abdominal wall, in the region where the sessile ascending colon is normally found in the adult. But the cecum may now "make up its mind" to descend. It has to push the already adherent ileum out of its way. The diagrams attempt to show how the ileum resists this displacement, and in its gradual yielding, how "Lane's terminal ileal membrane" is formed from the adhesions already acquired by the ileum, and how the axial rotation of the affected ileum (as described by Lane) must occur. The cecum and adjacent proximal colon obviously cannot become adherent in the ordinary way to the posterior abdominal wall, and thus arise the persistent mobile cecum and ascending colon. Sometimes the adhesion of the ileum makes it enter the colon from behind. Obviously, as the cecum descends, the subhepatic adhesions (omental) must be drawn out in the form of a veil with long linear vessels (Jackson's membrane). The appendix lags behind and develops into a retrocolic appendix, bound to the back of the colon or mesocolon by Jackson's membrane. Its tip is frequently free and assumes a hook-form. The fibers of Jackson's membrane will, in the adult, be more oblique or more transverse according to whether the "check" of the cecum takes place high under the liver or lower down on the posterior abdominal wall. Lane's ileal membrane, which tends to become absorbed, will be well formed or patchy in accordance with the extent of the original adhesion of the ileum to the posterior abdominal wall. Narrow strips of Jackson's membrane may become thickened and shortened and may cause angulation of the bowel (Parietocolic bands of Lane). Tension on these may cause pain. This story and the diagrams are built up from observations in the fetus and in adults. I have seen many examples of all four diagrams in both old and young patients.

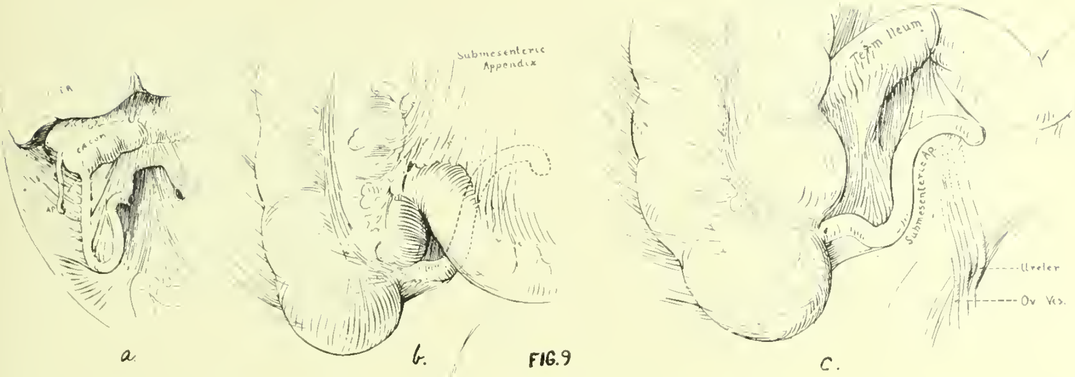

FIG. 9

Fig. 9.—This diagram explains the origin of what may be called the submesenteric appendix (Lane's controlling(!)appendix). The appendix becomes involved in the adhesions which, when the cecum "checks" under the liver, bind the ileum to the posterior abdominal wall. When the cecum descends the appendix is carried downwards and inwards along with the ileum and Lane's membrane. In these cases, and in many where the appendix is not involved by adhesions to its distal part, its proximal ½-1" is restrained by thin bands—the lowest part of Jackson's membrane. When the cecum distends, or descends, for example when the erect posture is assumed and the bowel is heavy with liquid contents, this latter adhesion will probably kink the appendix. The origin of many attacks of appendicitis and the relief of pain following a successful enema is explained.

In these figures, for the sake of clearness, the main part of the omentum has not been shown. Jackson's membrane and the subhepatic adhesions are merely modified omentum. If an adequate operative incision is made, Jackson's membrane can be traced up around the hepatic flexure, and be shown to be directly continuous with the greater omentum. At its lower part it can often be shown to be continuous with Lane's membrane.

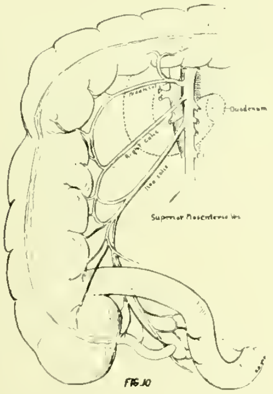

Fig. 10.—This represents the ordinary arrangement of the blood-supply to the ileocecal junction. It is obvious that if the cecum "checks" for any considerable time under the liver, that the ileocolic vessels will tend to be short. If and when the cecum descends these short vessels will tend to exert a pull when the patient is erect and may help in obstructing the duodenum. Possible shortness of these vessels should be borne in mind when colopexy is done. The cecum may require to be slung at a higher level than usual.

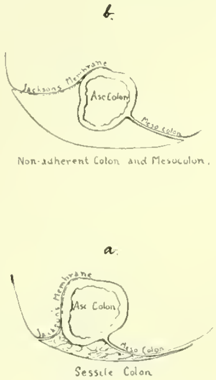

FIG. 11

Fig. 11.—(a) To show the arrangement of parts near the upper end of the proximal colon. Jackson's membrane is at all times quite distinct from the mesocolon although it may be closely applied thereto.

(b) To show the condition which may be found when the colon and mesocolon do not become adherent. "Retrocecal" pouches or "retroperitoneal" cysts may take origin from such an arrangement. In a few cases Jackson's membrane is found to be absent.

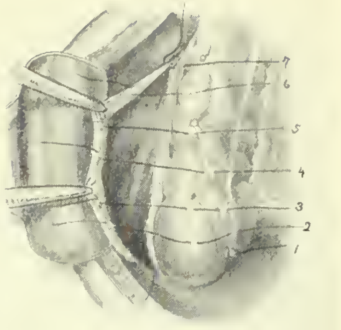

FIG 12

Fig. 12.—Proximal colopexy. The peritoneal flap has been fashioned, the psoas cleared of fat, bleeding carefully controlled, and the stitches (fine linen or chromic gut) inserted preparatory to tying.

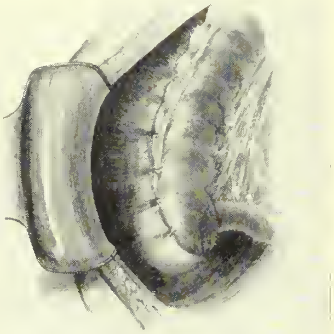

FIG 13

Fig. 13.—Proximal colopexy completed.

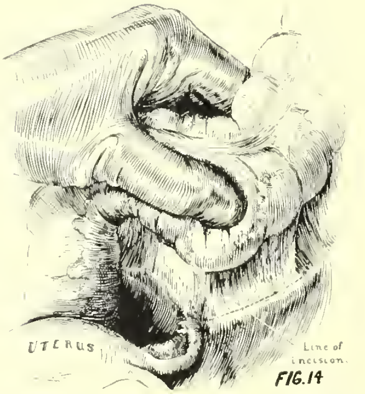

FIG.14

Fig. 14.—A common type of mesosigmoid adhesion. Division, until the sigmoid is quite freely movable, is required. The sigmoid is then arranged in a gentle curve in the iliac fossa. Usually no need to fix it by sutures.

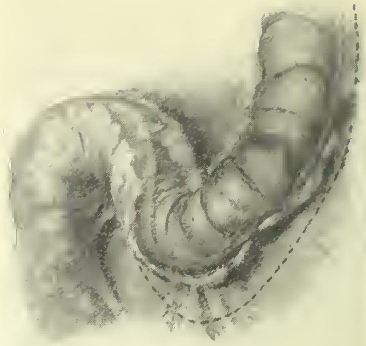

FIG 15

Fig 15.—Where there is a long loose loop of sigmoid and rectum below such a mesosigmoid adhesion, division of the adhesion and of the peritoneum on the outer side of the colon is made to a point sufficiently high that, when the lower end of the descending colon and the upper sigmoid are pushed upwards in slight concertina fashion without actual kinking, the slack of the lower colon is taken up. The back of the colon must be freed before this can be done efficiently. Adhesions between the raw surfaces take place rapidly so that the bowel tends to stay in its new position without fixation sutures. To help it to do this, the head of the table is depressed during closure of the parietal wound. In bad cases, excision of the sigmoid loop may be advisable.

In these lantern slides, I have dealt, almost exclusively, with those conditions affecting the colon to which serious attention was directed first by Sir William Arbuthnot Lane of England and by Jackson of America. Since 1911 I have, along with Flint and others in the United States, combated the explanation which Lane put forward with regard to the origin of the various membranes and adhesions which are found in connection with different parts of the bowel. In ascribing these to the effects of intestinal stasis, Lane puts the cart before the horse. They are produced, he says, by "crystallization of the lines of strain." The overweighted gut provides this strain. He adheres obstinately to his theory, but facts clearly show that these membranes are due to developmental processes. So far as the proximal part of the colon is concerned they are due to variations in its migration and in its fusion to the posterior abdominal wall. They are the cause, not the effect, of colonic stasis. The omentum takes part in this variation of migration and fusion and is, in virtue of the connections which it forms in the right half of the abdomen, a potent factor in the production of the conditions which give rise to symptoms. The site and extent of fusion of the omentum to the areas below the liver and to the posterolateral part of the abdominal parietes vary with the variations in time and extent of the descent and fusion of the cecum and proximal colon. Disguised as more or less fibrous bands, this adherent omentum may cause kinks of the bowel or affect appendix, gall-bladder, duodenum and liver, one or all.

Lane, in his numerous writings, has revealed the far-reaching and very diverse results of intestinal toxemia. I agree that he strikes at the roots, the far-back original causes, direct and predisposing, of possibly the majority of ordinary human ailments, although, like all enthusiasts, he appears, to most individuals, to apply his views in excess. But we do well if we keep his opinions in mind. At the same time, however, we must remember that in the treatment of most cases of intestinal stasis, dieting, exercises, aperients, enemata, colonic lavage, etc., bring about only temporary amelioration. They do not, of themselves, remove or even combat the primary cause.

The fact is unassailable that the health of the human body, as a whole, or of any of its organs or tissues, in particular, depends very largely, directly or indirectly, on the nutritive value of the body fluids. These are derived, or replenished, in the first instance, from the *prima via*, the gastro-intestinal canal.

Anything which interferes with normal mobility, normal motility, normal secretion or normal absorption in the alimentary tract predisposes to the production of abnormal and faulty body fluids. Sooner or later, their deleterious effects on general or local nutrition become evident. The sequence of events, so far as our subject is concerned, is that, when the normal mobility of the colon is interfered with, there follows modification of its motility, which in turn leads to noxious changes in secretion and absorption. A usual result is stasis, and stasis, apart from its local effects, allows unhealthy decomposition of the contents of the bowel. So-called intestinal toxemia is the result. Why do individuals afflicted with, let us call it for brevity's sake, pseudo-appendicitis, so frequently suffer from general ill-health, or from definite disabilities in distant organs?

Metabolism, a series of chemical processes, is bound to be modified, is bound to diverge from the normal, in proportion as the materials taking part in its chemical reactions are abnormal. I would repeat that, as Lane pointed out, the products of this abnormal metabolism, originating in the alimentary tract, may affect the body as a whole, or may affect, more conspicuously, any of its component parts. It is a matter of common sense to believe that individuals and organs and tissues vary in their capacity to cope with these abnormal substances. The individual person or organ or tissue may have very definite idiosyncrasy with regard to varying products which are absorbed. "One man's meat is another man's poison"! The character, the amount, and the variety of these poisons depend (1) on the kind of food which is ingested, (2) on the part of the alimentary tract which is interfered with, and (3) on the precautions which the affected person, knowingly or unknowingly, takes to counteract the active or latent disabilities which are present within his abdomen.

Allow me to enlarge a little on these three points:

(1) All have had experience of foods which have temporarily disagreed. Evidence of the disagreement may have been postponed even for days. It may have manifested itself by headache, sleeplessness, loss of appetite, nausea, "biliousness," lassitude, rheumatic pains, spots before the eyes, "nettle rash," renal irritation, or many other inconveniences,—a remarkable diversity of symptoms, due merely, it may be, to a single indiscretion in diet! It is reasonable to suppose that the continuous absorption of deleterious material, manufactured in the bowel, brings on symptoms which may be insidious and apparently inexplicable but are equally diversified and disabling, and are certainly more persistent. This deleterious material may, of course, result from perfectly natural and agreeable food stuffs.

(2) In acute intestinal obstruction the intensity of the symptoms depends in great measure on the site of the obstruction. But whatever part of the bowel is obstructed, there is always absorption of toxic material from it. The toxins are of two kinds—(a) those due to bacterial growth and (b), in some cases by far the most important, those due to improperly digested proteid substances called proteoses, which are capable of causing intense collapse. The lower the obstruction the more do bacterial toxins assert their presence. The higher the obstruction the more do proteolysed substances participate in causing the general breakdown. We have, no doubt, all been impressed by the rapid improvement which follows relief of such obstruction, especially when enterostomy has been performed. It is sometimes almost as impressive to note the rapidity with which chronic, well-established symptoms disappear after the colon has been dealt with as I have described.

The proximal colon seems to make the pace for the rest of the large bowel. When the loose, dilated caput coli is correctly supported and other colonic abnormalities are suitably dealt with, the colon loses its character as a "cesspool", and evacuations may occur spontaneously in a few days, even though obstinate constipation may previously have been the bane of the patient's existence. The rapid acquisition of a sense of well-being is usually equally striking.

(3) In the vast majority of cases I believe that the ill-health which we are discussing originates in loss of tone in the so-called voluntary muscles of the abdominal wall, and in the muscular tissue of the gastro-intestinal canal. Ptosis and kinks occur. As a result vicious circles are set up. It becomes merely a matter of time or of circumstances until local or general breakdown occurs.

Although the value of efficient musculature in the abdominal wall is appreciated by those who take good care of their bodies, it is disregarded by too many. Hence the lucrative trade in abdominal belts and other supports!

It would seem that the loss of tone usually occurs primarily in the abdominal wall. In most cases, although the bowel conditions are present practically since birth, loss of tone in the bowel develops or follows, pari passu, only with loss of tone in the supporting muscles. Often there exists a definite cause for this loss. Until this takes place, the abdominal muscles, by their support, usually combat the tendency to coloptosis.

Incidentally, does coloptosis precede and predispose to general visceroptosis? It is certainly the most important factor in producing ill-health.

In a small number of cases, the bowel is so handicapped that it initiates the trouble, which then appears usually at a much earlier age than is ordinarily the case.

I may interpolate the remark that many writers, for example, Waugh of London, state that the colon is usually atrophied in the cases under discussion. I have only exceptionally found it so. Like the heart in chronic cardiac disease, the colon in these cases is usually hypertrophied, but loses its tone under extra strain. . The remedial measures employed help to simulate this hypertrophy.

Change of occupation, change from active to sedentary or otherwise comparatively inactive habits, and the weakening effects of acute illness, lead to loss of tone. Modern labour-saving devices which obviate the necessity for bending, tend to foster this loss of tone. Symptoms frequently begin to be troublesome within a few years or even months after, for example, the young clerk or shop-assistant has started his job. He is suddenly cut off from his previously active, tone-giving mode of life. The appreciation of the onset of symptoms frequently occurs about 20-25 years of age. In the continuously active adult, the cause of breakdown may be postponed until fairly late in life. Stretching of the abdominal wall by pregnancy may precipitate the trouble. On the other hand, during pregnancy, owing to the support given to the affected bowel by the expanding uterus, previously existing symptoms may be relieved. They usually return after delivery, possibly with increased severity.

In an individual whose internal arrangements are like those depicted in the lantern slides, anything which reduces mental or bodily health or general tone may pave the way to chronic ill-health from coloptosis.

In some cases there seems to be no evident cause, when, in spite of the healthiest conditions of life, the bowel fails to cope successfully with the faulty structural conditions. In these the dilated and hypertrophied state of the colon indicates the chronic struggle that has been going on. As in the case of the heart, compensation fails and deterioration in health may be rapid.

In recent years, since abdominal operations have become so common, there has sprung up a tendency to regard as normal the anatomical arrangements shown in the slides, and especially the loose proximal colon. This view has been put forward by surgeons.

I quote the following, regarding the ascending colon, from a popular English text-book of anatomy: "In the great majority of cases only the two sides and anterior surface are covered with peritoneum, the posterior surface being destitute of a serous coat. In a small proportion of bodies, however, the ascending colon is provided with a complete peritoneal coat and a mesentery, but this latter is so short that it admits of but a slight amount of movement of the gut."

Anatomists use average individuals as the basis of their descriptions. Surgeons, however, deal with abnormal people who complain of abdominal symptoms. I am of opinion that these colonic conditions are the primary cause of the great majority of abdominal complaints for which the abdomen is opened, excluding those due to specific inflammation of, or tumor of, the pelvic organs. The kidneys, especially the right one, share in the deleterious influence. If this be so it is little wonder that some surgeons should fall into error.

Summing up the effects of these developmental adhesions, we see that they can be included under three heads: Firstly and primarily, they are mechanical; secondly and thirdly and as a result of the mechanical influence, they are what may be termed reflex and chemical.

Mechanically they tend to produce stagnation. Remember that stagnation is not synonymous with constipation although it usually results in that. The stagnating contents of the colon may cause irritation so that periods of diarrhea may occur. Other symptoms may be aggravated at such times.

As I have already hinted, one must remember that the upright posture assumed by man is not suited to a person with a loose proximal colon or tacked down mesosigmoid. This is especially the case if adhesions bind the proximal colon to the posterior abdominal wall in its upper parts. Such a posture compels a loose, liquid-distended cecum to sink towards the pelvis, with consequent dragging on, or kinking at, the adherent parts. The colon of a quadruped, such as a deer, has long and loose attachments to the dorsal parietes, but it is supported by the ventral abdominal wall, and its contents are passed along in a more or less horizontal direction. Many thoughts are stimulated by consideration of this piece of comparative anatomy, with regard both to pathology and to treatment of the human individual.

What I have termed the reflex effects are due, in my opinion, mainly to the pull exerted on the ileocolic vessels and nerves when the heavy cecum sags downwards. Remember, as I pointed out, that these vessels are probably rather shorter than is normally the case. This causes a drag on the solar plexus through the superior mesenteric and is probably responsible for the uncomfortable, nauseating, "don't-know-what-is-wrong" feeling in the epigastrium which is often present. Needless to say, interference with the solar plexus must have considerable effect on the functions of the abdominal organs. No doubt, owing to the traction on the superior mesenteric veins, congestion of the small intestine, etc., is caused. These two factors may play a large part in the production of general visceroptosis especially in an abdomen in which there is probably a tendency for all organs to sag. There is little doubt that a drag on the isolated bands described as occurring especially on the right side of the abdomen produces reflex effects also.

The *effect on the chemistry* of both the digestive juices and the foodstuffs they deal with need not be more than mentioned again. The absorption of improperly digested food and of toxins from stagnating bowel-contents has so far-reaching an effect that it cannot be disregarded.

I shall not discuss symptomatology except in very general fashion.

When one grasps the fact that these developmental conditions may act mechanically in different ways and on so many different parts and organs of the abdominal cavity, one can realize that local symptoms may vary in different individuals and indeed may, and do, vary in the same individual at different times. This variation appears to depend on the character of the food, on the length of time after a meal, on the posture of the patient, on the condition of the bowel, on the presence or absence of constipation, and so on. In view of the multiple and varying effects of intestinal stagnation, of local distensions and of spasmodic tugging or of intermittent but more continuous traction on adhesions, it is little wonder that so many sufferers are classified as hypochrondriacs, neurasthenics, and so forth.

Lane's classical description of the systemic effects of intestinal stasis cannot easily be improved upon. I do not propose to do more than refer to the more apparent types of cases which are so responsive to adequate treatment. I should like rather, if time permits, to mention a few of the exceptional conditions which have interested me in recent years and which can be, have been, relieved by operation on the developmental peculiarities which we have under consideration.

Epilepsy.—I believe that a large number of such cases can be greatly relieved if not cured. Let us remember that, in some individuals, omission of "bowel movement," even for one day, produces headache, which is immediately relieved when evacuation occurs. In an unstable brain one can, therefore, readily believe that chronic intestinal toxemia may have more striking, cumulative effects. When non-traumatic epilepsy or "petit mal" develops after the first ten years or so of life, when it is associated with, or is aggravated by, constipation and when the physical signs or stigmata of intra-abdominal developmental adhesions and accompanying coloptosis, etc., are present, I think it is very worth while operating in the way I have shown. I have a strong feeling that a tendency to headache forms an additional reason for operation.

Some of the cases appear to be completely cured, others are greatly relieved in that the number and severity of the fits have been reduced. Headache has been usually entirely cured or at least greatly relieved, and in all cases the general health and appearance of the patient has been remarkably improved. I think I am well within the mark when I assess the value of this operative interference at a good deal more than 50 per cent.

Severe emaciation.—A girl of 18 had, for three or four years before operation, been losing weight steadily. She looked cadaverous, had no subcutaneous fat, felt weak and extremely depressed because no treatment had done her any sort of good. She had been dieted in all sorts of ways and by all available routes; she had been confined to bed for long periods and had also gone in for graduated exercises; drugs had been found of no use; and endocrine therapy "in extenso et diverso" proved futile. No cause for the emaciation had been found by the various experts who had dealt with her. As a last resource surgical aid was invoked. She had, well marked, the typical signs indicating the presence of perniciously acting membranes and their resultant accompaniments. She was of narrow build, her height was 5 feet 8¼ inches, and she weighed 60 lbs., made up chiefly of "skin and bone." Three months after my "spring-cleaning" operation she had increased her weight by 50 per cent. Within four years she, a robust maiden, came in at the head of a party which had done a twenty-five mile tramp over heather-clad hills in Scotland.

The "don't - know - what - is - wrong" type.—A young man, thirty-one years old, whose charge of a Hudson Bay Company's outpost entailed a strenuous existence. He had, during the winter of the year before his operation, made a journey of 1,000 miles with a dog-sleigh. He had walked on snow-shoes for 300 miles. He began to suffer in the following March from lassitude, headache, loss of weight, indigestion, periods of constipation, a tight cord-like feeling across the lower part of his chest, palpitation, a feeling of weight in the right side of his abdomen, and occasional sharp, deep-seated pain high up in the right side of the abdomen going through to the region of the angles of the lower ribs. He could assign no reason for his breakdown. Neither dieting nor aperients nor any of the simple medicines in his stock did him any good. He lived in dread of heart disease and cancer. Two days after operation he expressed himself as feeling absolutely different. In a fortnight he returned to his outpost, having lost all his old symptoms and already putting on flesh. In addition to a full complement of the adhesions described as usually preceding and accompanying a proximal coloptosis, there was a very short narrow band which slung a mobile right kidney to the under surface of the liver. I think that this was the cause of the sharp intermittent pains in his right side. He wrote to me recently that he was very well and had carried out the ordinary hard work of the post during last winter.

It is very striking how the onset of symptoms is long postponed in some cases, and then breakdown occurs more or less rapidly, as in this case.

In these days there is great hunting for focal sepsis as a cause for chronic rheumatism or arthritis. I merely put the questions, in how many cases is the organ which provides the supposed focus of infection, as in a tooth, primarily rendered unhealthy by the conditions of the colon which I have described? In how many cases is the rheumatoid condition directly due to absorption from such a colon? I have had many cases which tend to prove that the latter is the case.

A few remarks concerning diagnosis. The history and general appearance of the patient usually lead one to suspect the presence of these conditions which we have been discussing. One must remember that disease of any part or organ may have been brought on, or at least predisposed to, by these developmental factors. Such disease may distract attention from them or tend to minimize their importance in its causation. In the abdomen alone, symptoms may mimic especially those of appendicitis, cholecystitis, duodenal ulcer, colitis or cancer of the bowel. This has been pointed out particularly by Waugh. I can amply confirm his experience by my own.

Examination of the abdomen by palpation is supremely important. In my experience it is more informative and precise than *x*-ray examination as usually carried out.

I differentiate "pressure tenderness" from "traction tenderness." I have seen no mention of such differentiation in medical literature. An inflamed part, such as the gall-bladder, is marked by tenderness on pressure. Pulling on adhesions, in whatever part of the body, causes pain, and the existence of the adhesions in the abdomen which have been described can fairly easily be demonstrated in this way. Traction tenderness can be elicited most easily in the case of mesosigmoid adhesions. Here, as elsewhere, the narrower and shorter the adhesion, the more easily can the presence of this symptom be ascertained. Broad adhesions, even though short, are not usually so painful when traction is made on them. Push the skin downwards and outwards towards the iliac crest, dip the fingers into the iliac fossa, and try to move the sigmoid towards the umbilicus. If mesosigmoid adhesions are present, the patient will experience a sharp pain when they are put on the stretch.

In a similar way, by pushing up the skin of the right hypochondrium, dipping the points of the fingers backwards under the liver and then endeavoring to draw the colon downwards, the presence of subhepatic adhesions, to the gallbladder or liver, may be assumed if pain is produced. A similar maneuvre, trying to insinuate the finger tips on the outer side of the proximal colon and then attempting to draw it towards the midline, will help to decide whether Lane's so-called "parietocolic" bands, thick and short parts of Jackson's membrane, are present. By drawing the cecum upwards, evidence of the presence of pericecal adhesions or Lane's terminal ileal membrane may be obtained.

You will readily understand that pressure on a distended cecum may cause pain occasioned by drag on adhesions around its periphery or in its neighborhood. This is after all a traction tenderness elicited by pressure.

My old house surgeons talk about "Gray's sign." This is elicited in the following way. Search with the right index finger over an area, roughly one and one-half inches from the umbilicus, in a line between the latter and the outer part of Poupart's ligament. If a tender spot, usually finger tip in size, is found there, estimate the amount of pressure required to produce the tender sensation. Relax the pressure and make a diffuse pressure in the right iliac region with the back of the left hand or fist. Then exert the same amount of pressure again over the spot previously located on the left side. If the sign is positive, it will be found that the tenderness has disappeared or is greatly reduced. A positive result indicates the presence of a Lane's terminal ileal membrane or a submesenteric appendix, or both, but, rarely, either or both may be present although the test is negative. This sign has not yet been mentioned in books. I have not heard a reasonable explanation for the sign, but I have found it to be one of the most reliable of physical tests applied in abdominal work.

In a slim patient the loose cecum, and adjacent proximal colon, can frequently be felt gurgling under the fingers. It may be irritable so that it can often be felt to contract, or it may be in an already contracted condition, when it may give rise to suspicion of an inflammatory or tumor mass.

In many, especially in well-nourished, patients deep, direct pressure may simply increase the discomfort already felt in that region.

Where a noxious mesosigmoid adhesion is present, the sigmoid is often felt to be contracted and, when a stroking, downward pressure is made transversely to its long axis, it may roll under the fingers and feel like a sausage. When similar pressure is made parallel to its long axis the sigmoid usually can not be palpated. This serves to eliminate all thought of a new growth.

Associated with these adhesions there may exist areas of cutaneous hyperesthesia corresponding to the organs implicated by them.

Your committee of arrangements evidently agree with my opinion that the foregoing is a matter of very great importance—one which, in these days, cannot be too strongly impressed on the profession. These pericolic adhesions on the right side frequently give rise to symptoms which are mistaken for those of appendicitis. Removal of the appendix alone does not usually relieve the patient permanently. The old pains return, possibly in aggravated form, usually within a few weeks or months, after the postoperative adhesions, which fix the cecum temporarily, have become absorbed. Proximal colopexy, correctly carried out, provides apparently a permanent cure.

Treatment.—I shall deal with this very briefly. In view of the pathological-anatomical conditions, it is very evident that no treatment short of operation will remove these developmental adhesions or make a loose proximal colon become adherent.

Acquired adhesions usually tend to become absorbed in response to the continued but intermittent dragging exerted by peristaltic action of the bowel, respiratory movement and force of gravity, provided that this drag is not so severe as to cause undue irritation. It seems quite the reverse so far as developmental adhesions are concerned. After a certain stage in development, which I would place in early infancy, such adhesions do not become absorbed nor does fixation of abnormally loose organs occur, unless pathological, especially inflammatory, conditions intervene. Dragging on them by an overloaded or distended bowel appears to make them become thicker, edematous and more fibrous.

There is a considerable field for prophylactic measures opened up especially in localities where a yearly "look over" has become popular. One can "spot" young individuals who are likely to have trouble. As pointed out during the lantern demonstration, there are two types, those of lean, narrow build and those with short, broad, rather flat abdomens. The latter type is liable to put on flesh as age advances.

Prophylactic and curative treatment are conducted along the same lines.

Nourishing diet, with suitable proportion of roughage and a free intake of simple fluids, physical exercises of various sorts, especially in the fresh air, and, if necessary, regulation of the bowels so that at least a daily evacuation occurs, are the main items in prevention, as well as cure. The patient should lead an active, well-balanced life. Exercises should be directed especially to maintenance or improvement of the tone of the abdominal muscles. If trouble has already developed the wearing of an apparatus often gives great relief—a broad belt or large kidney-shaped truss, designed to support the flabby, often protuberant, lower abdominal wall. Attempts to get the patients to put on fat may be made by special diet and, in addition, even confining them to bed for a few weeks. Fat accumulating in the mesenteries tends to shorten them. Fat deposited around the colon, in the omentum, and in the abdominal parietes provides support, in various ways, for sagging intestines and kidneys. One must not forget, however, that people with plenty of fat may suffer equally as severely as those who are thin.

Special sanatoria do great business with individuals suffering from these developmental disabilities. A prominent feature in the treatment they receive in these institutions is high colonic irrigation. They usually improve greatly during residence there but speedily relapse if the old habits of their ordinary life are not amended. To get the individual back to the habits he had when he was well is always a difficult and often an impossible matter.

Whether operation should be advised or not is to be decided upon usually after consideration of the "pros and cons." In some cases chronic obstruction or disabling pain leaves no doubt as to its advisability. In a few cases, acute obstruction demands immediate interference. In the great majority of cases, however, after they begin to have pronounced trouble, the severity of local or general symptoms, the purse and inclination of the patient, his capacity for spending time and money in medicinal, mechanical, physical and institutional treatment, and the result of treatment already carried out, are amongst the more important determining factors.

With regard to the operation I have described, I have found it to be one of the most satisfactory which I have undertaken, in providing relief and extraordinary improvement in health and enjoyment of life. At the same time I must warn you, that if the varying conditions found are not properly dealt with, there may remain such inconvenience or pain that failure is the only description of the result. Careful study, over a period of sixteen to seventeen years, of these conditions and of the surgical measures required by each one, has led me to advise operation in all cases where relief is not obtained in a few weeks by non-operative treatment. Why tinker with them for a longer time? *Cure* of such mechanical deficiencies can be effected only by mechanical means applied through an incision extensive enough to allow free, uninterrupted inspection, manipulation and appropriate treatment of *all* the affected parts.

DISCUSSION

Dr. E. P. Quain (Bismarck, N. D.): The question of the proper interpretation of painful symptoms in the lower right abdominal quadrant engaged my attention a number of years ago. Many members of this Association will remember my discussions on the subject, or may have noticed some of my published articles. After several years of additional experience, the conviction has become more and more firmly established that the appendix is too often accused of crimes it never committed. Prompt removal should follow every diagnosis of acute appendicitis, but the question changes when we are confronted with a case of chronic appendicitis. Chronic appendicitis is not always easily diagnosed. It is a more infrequent disease than acute appendicitis. Judging from our own records we believe that, in this part of the country at least, any surgeon who operates on a greater number of cases of chronic appendicitis than of acute appendicitis, is entertaining an unwarranted spite against the defenseless appendix.

In our experience the most frequent cause of mistaken diagnoses of chronic appendicitis has been the fact that certain colonic abnormalities can and do produce a train of subjective symptoms which sometimes are rather hard to differentiate from those of appendicitis. The dragging effect of pericolic membranes attached to the parietal peritoneum near the iliac crest often causes pain and discomfort which closely simulate the tenderness and pain originating along the appendiceal lymphatics. The pain may be either recurrent, or constant, in its nature. Each attack may show a slight rise of temperature, and some emesis may take place. Tenderness is noted in the appendix region, but careful palpation will show that more distress is produced by deep pressure outside the cecum and ascending colon than in the direction of the umbilicus. Leukocytosis is absent. Lying down often gives relief, and especially when the patient lies on the right side, or on the abdomen. If one has the opportunity and the time, it can often be demonstrated that rest in the Trendelenburg posture removes all distress from the appendix region.

The underlying anatomic pathology has been previously described by me in several articles, already referred to. Time forbids its rehearsal here.

TREATMENT

Since the symptoms are due to malpositions it follows that purely medical therapeusis has but slight curative value. However, attention to the posture of the body is helpful to cut short a painful attack. An abdominal supporter and pad made specially for the patient gives relief if the abdominal wall is relaxed. When the symptoms are severe enough to become disabling, operation is advisable.

The only logical surgical treatment of symptoms due, not to any disease of the appendix itself, but due primarily to a hypermobile right colon, is to elevate the colon to a higher position and to fix it there by sutures or other means. From over 300 operated cases we have obtained the following proofs in support of this contention:

1. Removal of a normal appendix does not remove right-sided pain caused by the dragging of a ptotic cecum. Colofixation does.
2. Pains persisting after appendectomy for so-called chronic appendicitis disappear entirely after a colofixation as a secondary operation.
3. Elevation and fixation of the colon, and not removing the appendix, will cure the patient whose symptoms are erroneously termed "chronic appendicitis," when in reality they are due to coloptosis and pericolic membranes.

We have tried several methods of attaching the colon to a higher level in the abdomen. Direct suturing of the bowel wall to the muscles of the back, or to a flap of the posterior peritoneum, we have found to be an unnecessary and sometimes a harmful procedure. Merely to incise the peritoneum and lift the colon into proper place by sutures attached to the colonic wall and pulled out through a stab-wound in the flank is much quicker and requires much less traumatization. This also affords the additional benefit of a temporary drainage from the retrocolonic space where aberrant and infected lymphatics may become damaged during the preparation of the new resting place for the colon. The presence of a heavy pericolic membrane is a convenient natural ligament which becomes very serviceable when its direction of pull has been controlled by one or two sutures.

Subjective results, together with *X*-ray demonstrations indicating the permanency of fixations by this method, have been of such satisfactory and pleasing character that we feel more than justified in a continuation of our technic.

Dr. H. M. Waldren (Drayton, N. D.): We have been quite deeply interested in this subject of Sir Henry Gray's, especially since we first heard him discussing it in Milwaukee, in 1924.

His paper, at that time, apparently cleared up a number of points which had been bothering us in our work in the lower right quadrant of the abdomen. Dr. Ramstad, for Dr. Quain, has called your attention to the fact that the poor appendix has been blamed for many things for which it should not have been held accountable. The formula has too often been, "Dyspepsia plus pain at McBurney's point equals operation."

I am glad to note that we are getting a better view of the symptoms and pathology of conditions that have been mistaken for appendicitis that have been so ably discussed by Sir Henry Gray and driven home by his demonstration of the subject on the screen.

Gibson, in 1920, reported, in the *American Journal of Medical Sciences*, 600 consecutive cases from which there were obtained 259 excellent results, but only 85 per cent of these showed pathological changes. In 102 instances of this series there was no relief had from operation although 65 per cent of the appendices showed pathology. These figures show a failure of 40 per cent. In view of this, is it not high time that we put a little more attention on our diagnosis and apply a proper technic for the cases that are the result of developmental anomalies. If we do this, we should be able to approximate the results of the work obtained in this field by the essayist. If proper study is given to the clinical history, to the blood count, and to radiology,—and speaking of radiology, I have frequently had the statement made that the *X*-ray is of no help, but I want to say that we have found it of very definite assistance in arriving at our diagnosis. However, a proper technic must be followed: The time of entrance of the head of the opaque meal into the cecum and colon should be observed; its passage through the colon observed closely; the filling of the cecum and proximal colon; and the observation of the tail of the opaque meal leaving these organs. We find a wide variation in this. At times we have observed the cecum still filled and distended at the end of sixty-five hours. When the cecum and proximal colon are still filled, pictures should be taken in the upright and recumbent positions; these pictures compared, and the vertical motility determined by the height of the cecum in the two positions.

A symptom that I have not heard mentioned, but which we often elicit in our clinical histories and which is frequently volunteered by the patients themselves, is that when lying on the left side, a falling or dragging sensation occurs in the abdomen and is referred to the portion of the abdomen under discussion.

I think it was only in 1909 that Dr. Jackson operated on a supposed case of appendicitis with no relief to the patient. He later operated on the right adnexa. Still there was no relief. Considering that the symptoms might be due to the left adnexa, he again operated, but finding no pathology, he enlarged his incision and found the precolic membrane which has since been known as Jackson's membrane. He divided this and the patient was completely relieved of the pain. Carpentier, in France, operated on a patient for appendicitis with no relief. He then treated the patient for tubercular peritonitis. Later believing the symptoms to be due to gastric ulcer, he operated, and finding none, he did a hemicolectomy on account of the motility of the colon. This was followed by a recovery.

These cases should be diagnosed before operation by a complete history, by examination of the blood and by a proper radiological study, thereby saving ourselves from disappointment and the patient from unnecessary suffering.

The scientific part of this subject could not have been covered better than has been done by Sir Henry Gray and Dr. Quain. The Association and our scientific committee are to be congratulated on bringing this eminent surgeon to deliver this essay to us. Personally I am certainly grateful to him for the enlightenment I have received from him on this subject.

We have performed over one hundred operations for pathologically mobile cecums using the Gray technic, and, whilst we have had our failures, on the whole, the results have been extremely gratifying. With increasing experience, we will have fewer failures. I might cite one: A young woman came to us who had been previously operated on for appendicitis and had no relief. On making our right rectus incision, an enormously distended cecum and proximal colon extruded through the incision. Before proceeding, it was necessary to collapse this bowel. This having been accomplished, the cecum and proximal colon could be readily lifted through the opening and laid across the abdomen until they overlapped the anterior spine of the left ilium. We endeavored to correct this by the Gray technic of plicating the bowel and anchoring it to the right wall. The patient made a good hospital recovery but has since had a stormy time and we expect to re-operate on this case, doing a right hemicolectomy. We, of course, have had other cases that have not given us 100 per cent results, but since adopting the viewpoint that these cases are due to developmental anomalies, we have a better understanding and our work will continue to improve guided by our ex-experiences in this field.

Sir Henry Gray (closing); One thing I did not have time to mention was the value of the *X*-ray in this work. I think unless you take pictures day after day and in varying positions their importance frequently does not amount to much. I have often justifiably disagreed with the roentgenologist and disregarded his report and have made out things by physical examination which he did not and could not tell me.

I agree with both the "discussants" in what they have said.

While, in most cases, symptoms are liable to be assertive when patients are in the upright posture, yet in a few, especially those with a short, broad abdomen, the iliac discomfort develops during recumbency. A possible explanation of this is that, while erect, the anterior flat muscles press the cecum, etc., backwards and obliterate the kink formed by a parietocolic band which often exists about halfway "up" the ascending colon. When the patient is recumbent the muscles relax and allow the cecum to bulge forward so that the kink is aggravated.

The abnormalities on the right side are so frequently accompanied by the developmental subhepatic and mesosigmoid adhesions which I have described that I recommend a complete "spring cleaning" through a thoroughly adequate paracentral incision. Otherwise one cannot expect to return the patient to ordinary life as a completely relieved and satisfied citizen.

COUNCIL ON PHYSICAL THERAPY OF THE A. M. A.*

By H. J. Holmquest, B.S., (M.E.)

Executive Secretary

CHICAGO, ILLINOIS

A quarter of a century ago the advertising pages of medical journals were filled with advertisements of medicinal preparations, for which therapeutic claims were made that were even more startling than some of the therapeutic claims made to-day for electric heaters, similar to the ordinary bathroom heater. The most significant move in the warfare against this chaotic situation in the field of drug therapy was the establishment of a Council on Pharmacy and Chemistry by the American Medical Association. Fraud and gross deception in drug therapy has been successfully combated until now reputable medical journals are free from flamboyant and preposterous advertisements of drug preparations.

To-day there is a similar chaotic situation in the field of physical therapy. During the World War it was shown that physical therapy has a legitimate place in medicine, and since then the practice of this mode of treatment has extended tremendously. The merits of physical therapy are being recognized by reputable physicians. Unfortunately, however, cultists, barbers, masseurs, beauty parlor operators, Turkish bath proprietors, chiropractors, and osteopaths have seized upon it as a profitable means of increasing their income. Physical energies have certain definite, known beneficial physiologic effects and perhaps other equally as definite, but as yet unknown, effects of a harmful nature. Therefore, irresponsible persons, untrained in medical science and unlicensed to practice medicine, should be prevented from diagnosing and treating disease by means of physical energies for the same reason that such persons are prohibited from practicing medicine and surgery.

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*Presented before the Forty-seventh Annual Meeting of the South Dakota State Medical Association, held at Hot Springs, S. D., August 7-8, 1928.

Apparatus generating every conceivable form of physical energy is being advertised to the medical profession for therapeutic use. Probably much of the reputed therapeutic worth of many of these devices can be attributed to the nickel and enamel with which they are adorned. Physicians are being importuned by salesmen, untrained in medical science, to buy such apparatus. Unfortunately, these men often take it upon themselves to instruct physicians in the use of this apparatus and attempt to teach therapeutic applications. It is, therefore, not surprising that unwarranted therapeutic claims and absurd theories of the biologic and physiologic effects of physical energies are made.

Some manufacturers, realizing that physicians need training in physical therapy, established courses of instruction of one or two weeks duration. Although some of these courses were good, they were woefully inadequate. A physician cannot acquire the requisite training in biophysics and in the application of physical energies to the treatment of disease in so short a period of time. A number of itinerant physicians are about in the land giving similar short courses, some of which are probably fostered by manufacturers for the purpose of promoting the sale of their apparatus. Heretofore these courses could not be condemned too severely, commercialistic and inadequate as they were, for courses in physical therapy and biophysics were not offered by the medical schools. But an increasing number of medical schools are establishing courses in biophysics and physical therapy, and soon manufacturers will be unable to justify their courses on the ground that schools are not providing adequate training.

Innumerable books of more or less value have been written on physical therapy. Some of them have apparently been written with an eye to the royalty statement or the publicity returns rather than to the possibility of scientific criticism. The chief qualification of the writers of some of these books for the part of authors appears to be that they have read the medical dictionary. Statements appearing in some of these books on the physics of apparatus for physical therapy are apparently culled almost entirely from the advertising and descriptive matter put out by a manufacturer. Some of the physical concepts appearing therein are wholly at variance with the concepts generally accepted by physicists and are probably due to a desire to make physical science conform to absurd, preconceived theories as to the biologic effect of physical energies. Such books do not serve as trustworthy guides but only as wanton displays of the authors' pathetic ignorance or conscienceless disregard of the fundamental laws of physical science.

The present literature of physical therapy consists, to a considerable extent, of unscientific statements of clinical experience and of therapeutic claims which apparently are not based on scientific observation. The extravagant therapeutic claims made for various physical energies by manufacturers are perhaps as much due to ignorance of the biologic effects of such energies as to a desire to sell apparatus. Later, when more scientific information as to the effects of such energies is available, it is possible that even more remarkable therapeutic claims may be warranted. However, before sound progress can be made in the science of physical therapy, this present mass of supposed information must be critically examined and the true separated from the false. The present known merits and limitations of physical therapy must be clearly set forth in order that it may develop along sound lines.

To assist in placing physical therapy on a rational basis, the Council on Physical Therapy was created by the American Medical Association. The Council as now organized comprises physicists, physiologists, pathologists, and clinicians. The General Manager and Secretary of the Association, and the editor of *The Journal* are ex-officio members of this Council.

This Council, having to deal with problems which lie in a field that has, as yet, been inadequately explored from a scientific viewpoint, has proceeded slowly and with conservatism. Without an exception the reputable manufacturers of apparatus have signified their desire to co-operate with the Council in placing physical therapy on a scientific basis. Such co-operation by manufacturers and by the medical profession will greatly aid the Council in solving the many problems with which it must deal.

Before physical therapy can develop along sound lines it must be divested of the unwarranted therapeutic claims and absurd theories with which it is now burdened. The Council intends to do this by publishing a series of articles on the various branches of physical therapy, in which all that is definitely known of the value and limitations of these modes of treatment will be given. In this series will be articles on *x*-ray and radium, on heat, on light, on electrotherapy, on hydrotherapy, and on massage, therapeutic exercise, and mechanotherapy. Several of these articles are now completed and have been published in *The Journal.* The whole series will probably have been published in *The Journal* by the end of the year, at which time the articles will be collected and published in book form for the guidance of physicians.

Apparatus and methods for physical therapy are considered by the Council with a view to assuring the profession that a device advertised to deliver a particular energy will deliver such energy, and with a view to minimizing fire and accident hazards, and with a view to checking up the therapeutic claims made for such apparatus and methods. A set of Official Rules was adopted to be followed in action on these devices. These rules were adopted primarily with a view to protecting the medical profession and the public against fraud, undesirable secrecy, and objectionable advertising in connection with the manufacture and sale of apparatus for physical therapy. The official rules follow:

RULE 1. *Nature of Apparatus.*—A device will not be acceptable for inclusion in the list, or retained therein, unless a full description of its construction and of its modus operandi is furnished to the Council for publication. Working plans and specifications with photographs and blue prints shall be supplied when requested.

RULE 2. *Efficacy.*—A device or method will not be acceptable or retained unless sufficient information and satisfactory evidence of its operation and effectiveness are made available to the Council.

RULE 3. *Advertising.*—A device or method that is advertised for diagnostic purposes or as a therapeutic agent will not be accepted or retained unless the advertising material and other descriptive matter prepared for distribution to physicians or to institutions or to the public have been submitted to and accepted by the Council. The therapeutic indications and the action of the device, or method, and the dosage may be indicated, provided such statements do not suggest self-treatment.

RULE 4. *False Claims.*—A device will not be acceptable or retained concerning which the manufacturer or his agents make false or misleading statements as to the nature of its contents or action.

RULE 5. *Unwarranted Therapeutic Claims.*—A device will not be acceptable or retained concerning which the manufacturer or his agents make unwarranted, exaggerated or misleading statements as to its therapeutic value.

RULE 6. *Dangers.*—The directions and the descriptive circulars accompanying a device must state plainly the limits of safety and the possibilities of danger attending its use.

RULE 7 *Standardization.*—A device will not be accepted or retained unless it has satisfactorily passed tests under conditions acceptable to the Council.

RULE 8. *Objectionable Names.*—Proprietary names for physical therapeutic apparatus will be recognized only when the Council shall deem the use of such exclusive names to be in the interest of public welfare. Names that are misleading or suggest diseases, pathologic conditions or therapeutic indications will not be recognized. The continual use of well established or existing trade names must depend on the addition of a descriptive name on the label as the main title, with the trade name in parenthesis below the main title. After March 1, 1927, no new trade names for physiotherapeutic methods, systems of physical education, or apparatus for therapeutic or diagnostic use will be recognized except when they involve the application of a new physical agent, or a new essential application of a known physical agent, and otherwise comply with the rules of the Council.

RULE 9. *Patented Apparatus and Protected Names.*—If the device is patented—either the apparatus or its mode of application, or both—the number of such patent or patents must be furnished to the Council. Furthermore, if the name of a device is registered, or the label copyrighted, the registration (trademark) number and copy of the protected label shall be furnished the Council. In case of registration in foreign countries, the name under which the device is registered should be supplied.

RULE 10. *Useless Devices.*—A device will not be acceptable or retained which, because of its unscientific construction, is useless or inimical to the best interests of the public.

RULE 11.—*Policies of Firms Detrimental to Rational Therapeutics.*—The Council will not retain, if already accepted, the appliances of a firm if, in the opinion of the Council, the policies of such firm are clearly detrimental to the welfare of the public.

The reports of the Council on devices and methods for physical therapy appear in that part of *The Journal* devoted to the work of this Council. Those devices and methods which have been found acceptable as conforming to the Official Rules will be described in a list of accepted physical therapy apparatus, which will be a book similar to "New and Non-official Remedies" published by the Council on Pharmacy and Chemistry. General reports on matters of importance to the medical profession and to the public are also published from time to time by the Council.

A goodly number of materials and devices for physical therapy have been submitted to the Council for consideration. Among these materials were various substitutes for window glass which were stated to be pervious to ultraviolet rays. Physical and biological tests of these materials were conducted for the Council by Professor Bovie to determine their efficacy as transmitters of the biologically active rays of the sun as compared with the efficacy or ordinary window glass. The per cent spectral transmission curves of these materials and of similar materials had been determined by other scientific workers, but no biologic test had been conducted to determine whether a sufficient amount of energy was transmitted by these materials to have any appreciable biologic effect. In the opinion of the Council, the biologic test was absolutely necessary, since we have no transformation constants which may be used to convert physical measurements into therapeutic effect. The investigation showed two things: first, that the intensity of the ultraviolet component of winter sunshine in a community such as Boston was sufficient to prevent leg weakness in chickens; and, second, that there were available materials for glazing windows that would transmit enough of the solar ultraviolet energy to have a decidedly beneficial effect on the growth and development of chickens. Whether the intensity of the ultraviolet component of winter sunshine in urban communities of this latitude is sufficient to prevent and cure rickets in children is a matter for further investigation. Before hospital authorities in such communities decide to spend a large sum of money for ultraviolet transmission glasses for solaria, it would be well for them to investigate whether the intensity of the solar ultraviolet in their community is sufficient for therapeutic use. They should also consider well the matter of deterioration of these glasses as a result of solarization. In Circular Letter No. 235 (3rd Revision), dated January 14, 1928, of the Bureau of Standards, there are presented data on the deterioration of these glasses due to the action of ultraviolet light.

Several reports on apparatus for physical therapy have been published, but before substantial progress can be made in the matter of evaluating the merits of special devices, much fundamental information must be obtained. For example, it is impossible at present to compare with any degree of accuracy the therapeutic merit of the various sources of ultraviolet energy. It is well known that the luminosity curve showing the efficiency of the eye for visible light shifts when the spectral energy distribution curve of the source changes. And it, therefore, would not be strange if the curves showing the relative effect of radiant energy of different wave length in producing other physiologic effects should shift with a change in the nature and intensity of the source. Before a definite statement as to the relative value of the sun, the carbon arc, and the quartz mercury vapor arc in the treatment of disease can be made, such phenomena must be thoroughly studied.

The Council on Physical Therapy believes that, since physical therapy is a definite part of medicine, adequate instruction in it should be given by the medical schools. To consider this matter a Committee on Education was appointed. This committee sent a questionnaire to the medical schools for the purpose of ascertaining what undergraduate instruction in physical therapy was being offered, whether it was required or elective, and what method of instruction was followed. On the basis of the information thus obtained, the committee prepared a report which it submitted to the Council, stating what it thought should be the minimum undergraduate instruction in physical therapy. The Council adopted the report and authorized its publication. This report will soon appear in *The Journal.*

A report offering suggestions as to how practicing physicians might be informed was also submitted by the committee to the Council. This report was adopted and will also soon appear in *The Journal.* The Council is now considering what training non-medical persons should have in order to qualify as physical therapy technicians.

Before sound progress in physical therapy can be made a scientific nomenclature must be adopted. The Council, therefore, appointed a Committee on Nomenclature and Definition to prepare a list of definitions. This committee submitted to the Council a suggested nomenclature. The terms defined therein consist of physical terms and of terms peculiar to physical therapy. The physical terms could be defined accurately from the definitions accepted by the various international congresses of scientists which have met for the purpose of adopting uniform, scientific nomenclatures. In defining the terms peculiar to physical therapy, the committee took into consideration the generally accepted usage of these terms. Wherever practicable the definition was followed by an example to illustrate the meaning and proper use of the defined term. This list of definitions will soon be ready for publication.

During the two years since the establishment of the Council, notable progress has been made toward placing physical therapy on a scientific basis. The influence of the Council is shown in the literature on physical therapy. The papers that are now being published attempt to give definite information based on scientific measurements. It is also interesting to note that the manufacturers are designing apparatus with closer attention to physical and biological facts.

The pronouncements and statements of the Council have not only imparted much needed information, but also have stimulated scientific workers to investigate biophysical phenomena. Endowments have been established to assist such research workers with monetary grants or to provide them with any special apparatus that they might need. A number of those who wish to do research work in this field have already conferred with the Council with regard to certain phases of the work they propose to do. From the information collected by the Council and on file in the department, it was possible to give them data which will doubtless be of great assistance to them.

The task of dispelling the empiricism of the past is well under way, and we can look forward to a day, probably not so distant, when the merits and limitations of physical therapy will be definitely established.

PROCEEDINGS OF THE MINNESOTA ACADEMY OF MEDICINE

Meeting of September 12, 1928

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town and Country Club on Wednesday evening, September 12, 1928. Dinner was served at 7 P. M., and the meeting was called to order by the President, Dr. John E. Hynes, at 8 P. M.

There were 36 members and one visitor present.

Minutes of the May meeting were approved as read by the Secretary.

The Executive Committee recommended the election of Dr. Wm. Lerche, of St. Paul, and Dr. Wm. H. Magie, of Duluth, to honorary membership in the Academy, both having retired from active practice. A motion was carried that they be placed on the honorary list.

Dr. Drake read the annual report of the Secretary; also the annual report of the Treasurer. A motion was carried that these reports be accepted, with instructions that the Secretary notify delinquent members of their absences.

The annual election of officers resulted in the following men being elected for the year 1928-1929:

President, Dr. C. N. McCloud, St. Paul; vice-president, Dr. Gustav Schwyzer, Minneapolis; Secretary-treasurer, Dr. Carl B. Drake (re-elected).

Dr. McCloud was called to the chair and thanked the members of the Academy for the honor given him in his election to the office of president.

Dr. John E. Hynes, retiring president, then addressed the Academy, the title of his address being "Some Constitutional Suggestions," in which he proposed for consideration by the Academy some changes in the Constitution and By-laws.

After some discussion of these various suggestions, Dr. Mann made a motion that the whole matter be referred to the Executive Committee for active consideration. Motion seconded and carried.

Dr. S. E. Sweitzer, Minneapolis, then read a paper entitled "Pellagra and Alcoholism." Lantern slides were shown.

DISCUSSION

Dr. Armstrong: Day before yesterday I saw a man who I now think probably has pellagra. I was not sure then, but after seeing these pictures tonight I am reasonably sure the man has pellagra. I had seen but one case before this. While I could not get much of a history from this man, as far as the gastro-intestinal symptoms are concerned. I think probably it is the dry form of pellagra. His face is not involved. He complains of a great deal of irritation of the skin of the forearms which extends up to the elbows. I would like to ask Dr. Sweitzer about the terminal joints of the fingers. In my case these were all free except one.

Dr. Sweitzer: It is usually free there. I think these cases are really pellagra. Up here we see very little pellagra, and we do not know much about it. Down South they make a diagnosis of pellagra on very slight symptoms, and a lot of cases do not have skin symptoms. We do not know exactly what pellagra is. In Crutchfield's cases in the South, he states that nearly all his cases had something else the matter with them.

So far as alcohol is concerned, I do not believe it makes much difference what kind it is or where they get it. In foreign countries the question of alcohol as a factor in pellagra is well known; and these cases I reported drank a lot and did not eat much and that disturbed their metabolism enough so that they all had pellagra. While our series was running, Dr. Allen went over to Ancker Hospital, in St. Paul, and picked a case of pellagra out of the hospital there.

It runs in epidemics down South; perhaps a hundred of them at a time, and then for several months they will not see any. I think there is a lot of work to be done yet as to whether it is purely a deficiency disease or is due to some other cause.

Dr. J. W. Bell: Apparently your cases were all males. That is a little unusual, is it not? In the South the proportion, if anything, runs to the other side. Is that not true?

Dr. Sweitzer: Yes, I think that is true, but ours were all males. Most of these would drink and then lie out in the sun in the park near the river for a long time. Apparently they drank a lot and did not eat much, and then were exposed to the bright sun for a long time.

Dr. Gilfillan: Is there anything characteristic about it in the way of a seasonal eruption?

Dr. Sweitzer: In the Philadelphia epidemic it was a seasonal affair and then stopped. Ours is stopped now. When women are affected they nearly always have the V-neck in front where the neck is exposed. These men would get drunk and lie out on the grass and get tremendous doses of sun; and the lesions were confined mostly to the hands, forearms and neck. Since the weather has changed and there is not so much sunshine we do not see any new cases. In the South the cases come all year long.

Dr. Gilfillan: Do cases relapse?

Dr. Sweitzer: Yes, they do relapse.

Dr. George Fahr: The treatment which is most effective in these cases is a diet rich in vitamines. Last year they came in just about the same time of the year as this. One man last year had all the psychoses and was a typical case. His brother gave a history that for approximately three years the man had lived on nothing much but alcohol and had had practically no food to eat. The things usually used in the diet now are yeast, meat cooked rare, large quantities of fruits and vegetables uncooked. On this diet they usually get over it unless they have cord changes. Very frequently they do get over it, but relapse again on a deficient diet. In the cases this year I did not go into the histories so carefully, but they had very little food and got most of their energy from alcohol.

They would get drunk, then lie out in the sun all day long, and then get something more to drink. Apparently there are no more cases coming in now. To see four cases in one week is quite remarkable except in the Balkan countries and in the South. I think some of these men did have some symptoms of psychosis. The first one I saw last year had definite psychosis. These cases of Dr. Sweitzer's got well very rapidly so far as the skin manifestations were concerned. All the patients had glossitis, and at least four of them had diarrhea.

Dr. Drake: Do you know of any change in the size and consistency of the liver in these cases? The condition of hemochromatosis shows a peculiar pigmentation of exposed skin surfaces, and Mallory showed that copper in the "moonshine" consumed was an etiological factor.

Dr. Fahr: There is quite a difference in the pigmentation in hemochromatosis.

Dr. Hammes: I was wondering if salvarsan would be of any value in pellagra. I saw a report somewhere they claimed they were getting good results with salvarsan.

Dr. Sweitzer: No, I do not think it would be of any value.

The meeing adjourned.

Carl B. Drake, M.D.,
Secretary

BOOK NOTICES

How to Make Periodic Health Examinations. A valuable book coming from the press of The Macmillan Company is "How to Make The Periodic Health Examination," by Eugene Lyman Fisk, M.D., and J. Ramsey Crawford, M.D.

Dr. Merritte W. Ireland, Surgeon General, United States Army, writes this Foreward to the book:

"Periodic physical examinations are of exceedingly great importance in the maintenance of health. The physical examination of an apparently healthy person must be systematically and thoroughly performed in order that injurious habits of living and slight or beginning functional or structural abnormalities may be revealed. The early detection of these conditions permit the application of corrective measures at a time when they will be most effective in preventing serious health impairment. This book provides a method of conducting a systematic examination which will obviate errors and assure the detection of obscure but vital defects."

—Richard Olding Beard, M.D.

The Heart in Modern Practice: Diagnosis and Treatment. By William Duncan Reid, A.B., M.D. Assistant Professor Cardiology, Boston University, School of Medicine; Associate in Cardiology, Evans Memorial; Cardiac Consultant to Newton Hospital; etc. 81 illustrations. Second edition revised and enlarged. Philadelphia and London: Lippincott, 1928.

Originally published in 1923, this 1928 edition is not only thoroughly revised and amplified, but much new material has been added. This is chiefly in the consideration of late developments in diagnosis and therapy, bringing the book up to date.

Since the publication of the first (1923) edition an official classification of heart disease has been adopted by the American Heart Association. This arrangement of subject matter has been followed, making the book a pioneer in that regard.

Into this volume of 466 pages (400 of text and 66 of appendices and index) the author has packed a great deal of well-considered information, presented in a pleasing and concise form.

The discussions are conservative; no fads are advanced; and the summaries, at the ends of various chapters, are of especial value.

Appendix I deals with diets and occupations suitable for cardiacs.

Appendix II contains a sufficient number of illustrative case reports.

The book is an exposition of the pathology, theory, and laboratory methods of identifying the various forms of heart disturbance and, at the same time, a practical guide to clinical diagnosis and treatment.

It is published by Lippincott & Co. The paper, type, and arrangement are excellent.

The language is free from too technical phraseology; clear statements are made wherever possible; and the book as a whole is a well written, well balanced, valuable treatise.

—W. B. Roberts, M.D.

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PHYSICIANS AND POLITICIANS

The present season, ending in the presidential election, has been a very brisk one and has given both doctors and politicians much food for thought. If we physicians were better politicians we might get along better, but, as a matter of fact, we are not enough so. We like to help sick people, and the politicians do not give a rap about individuals; they care about themselves. They are emotional, hysterical, bombastic, and very careless about their methods in most instances, while the doctors are obliged to be calm, deliberate, and painstaking, looking after the individual, not as one of a race, but as a single individual, except perhaps where the doctor is employed by a political body. Physicians as a rule are much more tolerant of one another now than they ever were before, and they have been growing so for the past few years, which means they are serving one another's interest in spite of all they have to combat. The politician rides around in his automobile or special train, according to his station in life, and the physician rides in an automobile or almost any other conveyance he can find in order to save life or at least relieve the suffering.

It is rather amusing to the average doctor to read a political announcement, seeing the vague promises,—impossible promises some of them are,—that the politicians make. The doctor is obliged on account of the sickness of the individual to study a case a long time before he makes any promises, one way or another, and in the majority of instances he does what he can by relieving suffering or shortening disease. But if we were to follow the politician's method we would be more in the limelight. We defy any politician who is a real politician to say that the doctor is in the limelight; he is, on occasion, but these occasions are few, as a rule. Yet the politician will damn a doctor up hill and down for some special reason, but the moment he is taken sick he demands a doctor at once, and all of his bombast disappears because he knows his doctor is scrutinizing him, making up his mind what to do for him and what should be done so that he may enjoy better health. It has been said that many politicians are emotional and not logical, which seems very reasonable to them but curious to the physician. And what we hear about who is to be our next president, or read in the newspapers, depends entirely upon our leanings in politics; if they are all right we will probably have two or three presidents.

It behooves the medical profession, in selecting a president, to select a man for the work he has done for sick people and the fighting of disease in general, rather than for his brilliancy. The writer is led to believe there is more money in politics than there is in medicine because the politicians can go out and raise an ample fund, say four to six million dollars, or something like that, by appealing to rich political cohorts. But when doctors start out with a laudable enterprise, the establishment of a hospital, say, they are met with absolute indifference as a rule. There are very few hospitals founded by doctors where they have secured sufficient funds from the public. The writer is led to believe, too, that those who have contributed to hospitals, doctors particularly, are financially unable to do so. But those who are in politics assess donors for certain sums and demand payment thereof. Of course it would be ideal if the political parties could get down to concrete facts and establish a reasonable basis for their discussions. But the present presidential campaign reduces itself to "wet" or "dry"—the liquor law; and whoever is elected president will have nothing whatever to do with the enforcement of the law. Some may think it is easy to overthow a constitutional amendment or loosen up some of the stiff places in the law and thereby win a comparatively few to their side, but the thinking people who know that constitutional amendments are not made and broken for political purposes will not be swayed either way. Then, too, the politicians who are not listening to the physicians on this same subject of "wet" or "dry" are not getting very much information from the general public except "we want a drink when we want it!"

It is impossible to foretell now the results of the campaign, but the politics of all classes and types will go on with their hurrah campaign and their publicity while the doctor keeps on attending the infirm, the sick, and the suffering, often without much hope of success in either.

Something has just come to the writer's notice, a new book called "Political Behavior," that is something like the exposé called "The Misbehaviorists" or those who rant of behavior. This book is written by Frank Kent, and the title is headed in the book review as "This Tricky Game of Politics." Mr. Kent firmly believes that the voters do not want to be instructed; they want to be amused. Perhaps that is the secret of these political "misbehavorists." At all events, our attention has been called to two or three important items. Mr. Kent, with a few others, believes that there are about 500 intelligent voters out of 5,000,000; it seems almost incredible. Someone has forestalled him in this by saying that there are 500,000, but out of 20,000,000 this is a small quota. Mr. Kent gives the readers a flattering statement when he says that "one of the most astute and experienced political observers in the country estimates the number of real voters at 500." But on page 108 of Mr. Kent's new book he said a liberal estimate of the number of voters who are sufficiently intelligent and well informed may be placed at 500,000. The presumtion is, of course, that among all these politicians the majority of them are working with one aim in mind—their own advancement. And considering that it takes a very large sum, perhaps unknown, to run a political campaign for the presidency, it must be assumed that many of the politicians are paid for their work. On the other hand we must consider some of the chapters which lead to a conception of a good political campaign, and the review speaks of it somewhat in this manner: "And here are a few of them: 'Give them a good show.' 'The art of seeming to say something without doing so.' 'Give them hokum.' 'When the water reaches the upper decks, follow the rats.' 'You must play the game with the gang.' 'When in doubt do right.' 'It is a humbug world.' and so on."

When one stops to consider that $1,000,000 worth of charity medical work is given out by physicians every day in private practice and hospital work, one realizes it would be impossible for doctors to raise any such sum to compensate these medical men. This would mean that about $365,000,000 a year is given in charity work. How many people realize it, and how little the political side of municipal life is considered on that basis. However, the politicians, as we have said before, have it all over the doctors, and they probably will maintain their hold on the people because they have nothing definite to offer except politics, and politics sometimes can be reduced to the lowest possible level.

CHANGING CONCEPTIONS OF CHRONIC ULCERATIVE COLITIS

A very interesting article by Dr. J. Arnold Bargen, of Rochester, Minnesota, on the above subject, is particularly timely, and doubtless many of us can look back over a period of time and recall instances where we have failed to recognize the pathological significance of mucous colitis. Although Dr. Bargen quotes from various authorities, he still has a very definite idea that it is a disease dependent upon a bacterium, a diplostreptococcus, and for years we have been treating these patients as suffering largely from a nervous condition. The editor himself can look back, in his experience as a neurologist, and recall many people who have passed through his hands suffering from this distressing complaint, and they have probably passed through the hands of others as well, yet he saw nothing but a nervous individual who in all probability had, at the same time, a definite structural change in the colon. He can look back, too, upon many patients who really seemed to be nervous people with a nervous colitis and who fully recovered, with no demonstrable continuation of the colitis. The writer is taking great liberties in saying this, but that is his personal experience.

Most German writers, so Dr. Bargen says, until recently have considered chronic ulcerative colitis as a non-specific ulceration of the colon. Doubtless this is true and even when their patients came to autopsy from some other cause resulting in death, nothing was found that would demonstrate conclusively that it was an ulcerative disease. Hence the tenacity with which we have held to the opinion that it is a biological factor in the course of human lives. Perhaps a great many people have had colitis, more or less, at times, and, after a change in their condition, such as might be brought about by the climacteric, for instance, have recovered; or if their circumstances or environments have changed they have recovered.

It is a dubious thing to consider, and Dr. Bargen gives the cause of death in 94 cases as chronic ulcerative colitis in seven years at the Mayo Clinic. That ought to be argument enough that we are sometimes misled by our patients, and their diseases go unrecognized, as is not uncommonly the case.

In discussing this very admirable paper, which is published in *The Journal of the American Medical Association* for October 20, 1928, the discussion was carried on by Dr. E. G. Martin, of Detroit, who does not think much of the vaccine idea, although he believes it is very effective in some cases. Dr. Frank Smithies, of Chicago, hardly knows where to put it but he calls it an "irritable colon," which is a perfectly safe description; and he does not believe in the treatment of disease by immunization by vaccines. He much prefers the word "desensitizer." But the writer is very much of the opinion that the time will come when we will be treating this and many other diseases by immunization.

Dr. Bargen urges that a proctoscopic examination be resorted to early and it is barely possible or largely possible that remissions would occur in the course of the disease if the patient was recognized as suffering from an ulcerative colitis. He further states that Buie finds there are adequate "footprints" of disease that will clear up much of the uncertainty. But Dr. Bargen believes that in place of the old method of irrigation, much better results are obtained by removing the foci, giving vaccine, and feeding the patient a light diet high in vitamins but low in residue. There may be other points in the paper which the writer has overlooked, but these are the principal suggestions given by Dr. Bargen, which seem very sensible and throw a good deal of light on the present consideration of mucous colitis.

THE AMERICAN PUBLIC HEALTH ASSOCIATION

The American Public Health Association has accepted the cordial invitation of the City of Minneapolis to hold its annual meeting of 1929 here. The Convention will meet in the big Municipal Auditorium, where it will find ample room for its general and sectional sessions and its scientific and commercial exhibts. The dates for the 1929 meeting have been set for September 30 to October 4, when Minnesota is usually at the height of its autumnal glory and the ducks are beginning to fly down from the northern lakes.

The Hennepin County Public Health Association, under the leadership of Dr. Richard Olding Beard, headed up the invitations to the National body. It was generously supported by the Minneapolis Civic and Commerce Association. Dr. Beard was ably assisted by Dr. F. E. Harrington, Commissioner of Health for Minneapolis, and Dr. A. J. Chesley, Executive Officer of the State Board of Health. They returned from the Chicago meeting last week assured of the unanimous selection of this city by the Governing Council of the Association.

The following institutions and health organizations of the City, County, and State have joined in the invitation for the 1929 meeting:

The State of Minnesota
The City of Minneapolis
The University of Minnesota
The University Medical School
The Minnesota State Board of Health
The Minnesota State Medical Society
The Minnesota Public Health Association
The Minneapolis Civic and Commerce Ass'n
The Hennepin County Medical Society
The Hennepin County Public Health Association
The Hennepin County Sanatorium Commission
The Hennepin County Tuberculosis Association
The Minneapolis Board of Public Welfare
The Family Welfare Association
The Children's Protective Society
The Woman's Club of Minneapolis
The Visiting Nurse Association
The Minneapolis Department of Public Health
The Minneapolis Council of Social Agencies
The Woman's Co-operative Alliance
The Hennepin County Child Welfare Board
The Council of Jewish Women
The Infant Welfare Society

Their active co-operation is anticipated in preparation for the gathering. Judging from the attendance at the Chicago meeting, Minneapolis may expect a large registration.

The American Child Health Association has been asked also to accept the invitation to come and to share in the opportunity for a joint session.

Details of arrangements for the event will be announced from time to time. Suffice it to say now that the city will well maintain its reputation as the hostess of such occasions and will expect in return only that its public health spirit will be newly kindled by the coming of so great a throng of health leaders and workers as its guests.

It is particularly interesting to note that Mr. George W. Fuller, nationally known Sanitary Engineer of New York, who served as Advisory Counsel to Minneapolis in the initial installation of its pure-water plant, some years ago, was elected, at the session just closed, as the president of the American Public Health Association, while Dr. Chesley was chosen as its first vice-president.

THE MINNESOTA CHIROPRACTORS

The Chiropractors of Minnesota have two associations, namely, the Minnesota Chiropractic Association, with a membership of about 125, and the American Chiropractic Association, Minnesota Division, with a membership of about 25.

The latter association held its annual meeting in Minneapolis last month, and following the meeting a statement was made in one of the daily papers of Minneapolis that this association had passed a resolution approving the Basic Science Law of Minnesota. The president of this association informs us that no such resolution was passed, but that he had said to a reporter that the board administering the medical practice act had worked satisfactorily to the members of his association.

As the Minnesota Chiropractic Association is apparently opposed to the law, there is a division of the Chiropractors of the State on this vital question.

MISCELLLANY

A RE-BIRTH OF THE MINNESOTA ACADEMY OF MEDICINE

The Minnesota Academy of Medicine has long been the ablest medical society in the Northwest, being composed, in the main, of physicians in the Twin Cities, Duluth, and Rochester, holding regular monthly meetings except in June, July, and August, with an attendance of thirty or more members and one or more guests.

In spite of the excellence of the Academy's work and the honor of belonging to it, "laxities and possible erroneous tendencies" have appeared, and the task of correcting them was referred to the Academy's Executive Committee, which has embodied its suggestions in a proposal for a new constitution and by-laws, the draft of which has just been sent to the membership. The Committee's letter of transmission embodies its main suggestions and as the letter may be helpful to other societies, we give it herewith:

Dear Member:

At the last meeting of the Society the retiring president in his address called attention to some of the laxities, and possible erroneous tendencies, into which the Academy had drifted. There was the intimation in his address that it would be well if we gave ourselves a searching self criticism. There immediately arose in the minds of the members present questions such as: Is the Society adequate? Has the function of the Academy been outlived? If there is need for an Academy what would be the best way to re-organize it to the present day tendencies. A very limited discussion arose along these points. A search into the nature of the processes which aroused Dr. Hynes critique and suggestions which would modify the situation for the better was referred to the executive committee.

The committee after due consideration agreed that Dr. Hynes' intimation was quite timely. It also realized that the only available method for an adjustment to present conditions would be by changes in the constitution. As this instrument was studied it was seen that it would have to be extensively rewritten. This task was done.

The old and the tentative (new) constitution are enclosed. They are mailed to you for the purpose of examination and comparison so that time might be saved at the next meeting when the committee's report will be made.

In reading the tentative document over it will be noticed the spirit of the present constitution is strictly maintained. There are several changes made which were thought would improve the "tone" of the Academy. These changes can be grouped under four heads.

1. Increase of membership. This is to cover the suggestion to infuse new blood.

2. Modification of membership:
   a. The term "Fellow" will indicate a past president, but henceforth will not diminish responsibilities as an active member.
   b. All University of Minnesota faculty members who enter the Society from now on will go on the active list.

3. Conduct of members:
   a. Penalties are a little more severe and automatic.
   b. The Executive Committee has more power.

4. A medal is suggested as a stimulus for Society activity. This is to take the place of the endowment idea.

5. The official year will start in December rather than in September. September has had the poorest attendance of all months.

In suggesting these changes the committee is trying to modify certain defects in the written law. It realizes it cannot change biological principles (the members). It has straddled the idea (1) of some who would like the Society to be merely social and

(2) of those who think the Society should be merely scientific. The purpose as the committee sees it is both, but the scientific is the more important. We urge the members to consider this dual feature in their future attitude toward the Society.

The Executive Committee

NEWS ITEMS

Dr. L. C. Bacon, of St. Paul, has returned from a trip to Europe.

Dr. Geo. B. Irvine has moved from Lake City, Minn., to Temple, Arizona.

Dr. L. T. Lohrbauer has moved from Grand Forks, N. D., to Oakes, N. D.

Dr. Angus W. Morrison and family, of Minneapolis, will spend the winter in Europe.

The Montana Social Welfare Conference held its annual session in Butte, on October 19.

Dr. J. G. Vigen, of Fergus Falls, Minn., has gone to Los Angeles to spend the winter.

The Minnesota State League of Nursing Education meets in St. Paul on November 6-9.

Dr. F. F. Stocking has given up practice at Milaca, Minn., and moved to Calumet, Mich.

Dr. H. L. Knight, of Minneapolis, has moved to California, and is now located in San Pedro.

The new addition to the University Hospital, Minneapolis, will be dedicated on November 11.

The Minnesota Public Health Association holds its annual meeting in Minneapolis on November 8.

Dr. O. C. Dixon has moved from Fairdale, N. D., to Adams, N. D., where he formerly practiced.

Dr. J. C. Farrell has moved from Arlington, Minn., to Minneapolis, and is located at 3353 Park Ave.

Dr. Andrew Larson, of Fertile, Minn., was married last month to Miss Verna N. Thompson, also of Fertile.

Dr. A. E. Perley, of the Rood Hospital, Chisholm, Minn., has gone to Philadelphia for an extended postgraduate course.

The alumni of the College of Medicine of the University of South Dakota, at Vermillion, S. D., held a reunion on October 19.

The Wadena County Board of Commissioners has refused to join the Todd County Board in the employment of a county nurse.

Dr. R. H. Mattson has moved from New Rockford, N. D., to McVille, N. D. Dr. Mattson is a U. of M. graduate, class of '20.

Only 31, or 81 per cent, of the applicants for admission to the Medical School of the University of North Dakota this year were accepted.

Dr. P. P. Halleck has moved from Letcher, S. D., to Stanford, Mont. A movement is already on foot to establish a hospital at Stanford.

Dr. Margaret Warwick, of St. Paul, pathologist of the Miller Clinic of St. Paul for eight years, has accepted a similar position in Buffalo, N. Y.

The North Dakota State Nurses' Association and the North Dakota State League of Nursing Education will be in session in Grand Forks today and to-morrow.

A plan will be sponsored by the North Dakota State Board of Health in the next legislature of the state to divide the state into districts with a full-time director of each district.

Miss Kathryne Radebaugh, Executive Secretary of the Hennepin County (Minneapolis) Tuberculosis Association, has gone to Columbia University for research work for some months.

The Minnesota Public Health Association and the State Medical Association have planned a series of meetings for the study of tuberculosis under the direction of the State Tuberculosis Association.

Dr. A. F. Campbell, a child's specialist of Seattle, Wash., has joined the firm of Drs. Johnson & Anderson, of Red Wing, Minn., as an associate in the firm of Drs. Johnson, Anderson & Campbell.

The American Public Health Association, which met in Chicago last month, voted unanimously to meet in Minneapolis in 1929. We make an extended notice of this important meeting on another page.

Dr. Alexander H. Rogers, of Newell, S. D., died last month at the age of 76. Dr. Rogers was a graduate of the University of Michigan, class of '77, and had practiced in South Dakota for over thirty years.

Dr. P. E. Owens, formerly of Philadelphia, and Dr. Rex E. Graber, of Bismarck, who has been doing postgraduate work in obstetrics and children's diseases, have joined the clinic of Drs. Roan & Strauss, of Bismarck, N. D.

The New York Times of Sunday, October 21, prints in its Magazine Section an extended article on "A Clinic City on Minnesota Prairies," sketching the growth and work of the Mayo Clinic with a picture of Drs. William J. and Charles H. Mayo.

Dr. Theodore Tennyson, of Minneapolis, died in California on Monday of this week at the age of 59. Further notice of his life will appear in our next issue.

Dr. James C. Jensen, of Hendricks, died last month at the age of 52. Dr. Jensen was a graduate of the Medical School of the University of Minnesota, class of '03, and had practiced in Hendricks almost since his graduation.

The St. Louis County Medical Society held its annual meeting in Duluth last month and elected the following officers: President, Dr. E. L. Tuohy; first vice-president, Dr. A. L. McDonald; secretary-treasurer, Dr. E. H. McIntyre, of Virginia.

Dr. R. B. Radl, of Hebron, N. D., has gone to New York for a short postgraduate course. Upon his return he will join the clinic of Drs. Perkins, Bowen, and Nachtwey, at Dickinson, N. D. Dr. P. J. Weyrens, of Akely, Minn., has succeeded Dr. Radl at Hebron.

The South Dakota State Board of Health is planning for a large amount of extension work in the state this winter under the direction of Dr. A. E. Anderson, director of the extension service. "Food Needs for Health" will be discussed in home extension clubs in fifty counties.

Dr. Robert M. Phelps, of Faribault, died last month at the age of 70. Dr. Phelps was a graduate of Rush, class of '85, and at once began work in the State Hospital for the Insane at Rochester and later at St. Peter. He remained in this service for forty years, retiring three years ago.

The Minnesota State League of Nursing Education, The State Public Health Association, and the State Registered Nurses' Association will hold a joint meeting in St. Paul on November 6-9. Dr. Henry Suzzalo, of the Carnegie Foundation, will be the principal speaker at the meeting of the three associations.

In our last issue appeared a news item concerning the annual meeting and election of officers of the Washington County Medical Society at Stillwater, Minnesota. As two of the officers named have been dead for some time, it is apparent that an error crept into the report. It was a report of the organization meeting of the Society many years ago.

Dr. Frank Burton, formerly of Minneapolis, who retired from practice and moved to California ten years ago, died at the Northwestern Hospital in Minneapolis last month at the age of 75. Dr. Burton practiced in Minneapolis nearly forty years and was once County physician for Hennepin County. He was a scholarly practitioner.

Dr. H. S. French has sold his practice at New London, Minn., to Dr. C. M. Peterson. Dr. Peterson is a recent graduate of the U. of M., and has been in the Duluth Clinic for the past year. Dr. French is a U. of M. graduate, class of '20, and may locate in Duluth. Dr. Peterson will open the Community Hospital at New London, which has been closed for some time.

At a large meeting of the Sioux Falls District Medical Society of South Dakota, President N. K. Hopkins and Secretary J. F. D. Cook of the State Association discussed questions of special interest to the profession and touched upon the basic science law, which will attract general interest this winter. Drs. Hopkins and Cook also attended the Rosebud District Society meeting last month.

Locum Tenens Work Wanted

A well-qualified physician desires licum tenens work. Address 536, care of this office.

Apparatus for Sale

One high-tension Diatherm in best of condition. Cost $525, will sell for $300. Address 535, care of this office.

Apparatus for Sale

A 24-plate Bertman Static and X-ray machine complete for $75.00. Write P. O. Box 623, Fargo, North Dakota.

For Rent in Minneapolis

Physician's and surgeon's office in common with an established dentist. Rent very reasonable to right party. Call Main 4602 or Colfax 2754.

Locum Tenens Wanted

For ten days in a general and surgical practice in a small hospital, starting November 7. Address Dr. H. O. Halgren, Watertown, Minn., or this office.

Small Hospital for Sale

A fine, small, all modern hospital and general practice in a prosperous community in Minnesota are offered for sale. Address 531, care of this office.

Locum Tenens Wanted

Beginning on November 15 and will last until January or March. Opening may be permanent position. The location is in a small town. Address 539, care of this office.

Position as Secretary Wanted

By a woman of large experience, who was ten years in her last position and can give the best of references. Will work in a physician's office or in a clinic. Address 538, care of this office.

Good Opening for a Doctor

Good location for a doctor. Can be appointed health officer with sufficient salary to pay office and house rent. No other doctor in the County at this time. Address Robert Dunn, County Attorney, Center, N. D.

Practice for Sale—Splendid Opening

Deceased physician's office equipment and half interest in hospital in one of the best towns in Western Minnesota. Practice pays from $12,000 to $15,000. Can be had on easy terms. Address 543, care of this office.

Partner Wanted

Doctor would like partner, German preferred. Capable of doing surgery in country hospital. Half interest in practice, hospital, and real estate. $10,000, with privilege of buying all in a year or so. Address 532, care of this office.

Technician Wants Position

An *x*-ray technician, experienced in clinical laboratory, physical therapy, and metabolism; also a typist wants a position in a clinic or hospital. Thoroughly competent and can give best of references. Address 526, care of this office.

For Sale In South Dakota

A good paying general practice. Locum tenens did $451.00 while I was away last month. Invoice price of modern office equipment takes the location. Practice established since 1907 in County-seat town. Collections were 98 per cent last year. Address 541, care of this office.

South Dakota Practice for Sale

A $12,000 to $15,000 medical and surgical practice of a doctor recently deceased in a town of 700, large farming community and no competition. Opportunity of becoming county health officer. Hospital and office in connection. For details write Dr. Vennegut, Hague, N. D.

Opening for Doctor

A good doctor is wanted to take over a well-equipped hospital. Large territory. No other hospital within 35 miles. Must be a good doctor and have some money. There is work enough for two doctors. Don't write, but come at once. Robert E. S. Snell, Pine River, Minn.

Physician Wanted in North Dakota

Egeland, N. D., wants a doctor. Egeland is situated on the Soo Railroad and also on the branch of the Great Northern out of Devils Lake. Our closest towns having M.D.'s are Cando, sixteen miles south and Bisbee, fourteen miles west. There is nothing north to the Canadian line or east to Langdon, so the territory has unlimited possibilities. For any more information the interested party may write Seiverts Drug Store or Mr. M. J. Borgerson at Egeland, N. D.

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Surgical shock may profoundly depress the nervous system. In convalescence from such a condition

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SYMPOSIUM ON PHYSICAL THERAPY*

By Colonel Edward R. Lindner
and
Lieutenant Charles M. Griswold
HOT SPRINGS, SOUTH DAKOTA

Colonel Edward R. Lindner: Last night at the banquet I told some of you that that was the unhappiest moment of my life. I think now that this is the happiest moment of my life. Perhaps I am a little more conversant with the subject before us than I am with after-dinner speeches. I looked up the word "symposium" and found that it comes from a Scandinavian word meaning "simp" and "posium" meaning "posing." So to-day I am a simp posing for you.

I would not have the temerity to come before you this morning with this subject unless I thought that we had something behind it to prove to you we know what we are talking about.

We give something like 5,600 to 5,700 treatments every month in this sanitarium under the head of physiotherapy treatments, consisting principally of the baths, the different forms of light, the massage, the heat, the *x*-ray, and everything but the radium. We haven't radium because we haven't any transient cases here at the present time.

We have everything here from an in-grown toenail up to dementia precox. We have had a good many of the latter cases.

I am going to try to make this symposium a sort of demonstration. We have ten or twelve very typical cases, which we will present to you and about which we shall be very gratified to answer questions you may ask. Some of these cases are in active stages; some of them are spines that have had treatment; there are two or three we can not use as testimonials at all because they have been done more harm than good.

We are talking about a subject that I know nothing about whatever from the electrical standpoint. These high-powered salesmen will come around and tell you that you can cure everything with their instruments, but this morning I am going to let you decide for yourselves whether you think it is plausible that this form of treatment will make cures. I do not say that it will; I do say we have many cases that it has helped, but on others it has had no effect at all.

Remember that I am not talking about the financial end. It is said to-day that it is a big asset for a doctor to have in his office one or two lights and a diathermy machine.

You perhaps have found, as we have, that you leave the operation to a trained attendant. You do not know very much about it yourself, no doubt, except that at the end of the treatment the patient will come to you and say he has or has not been benefited. We have not that sort of patients. They do not care a whoop; they will keep on taking treatments as long as we will give them because they are not paying anything for them. If we get a result it must be a natural result that we have had over a long period of time and treatment.

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*Presented before the Forty-seventh Annual Meeting of the South Dakota State Medical Association, held at Hot Springs, S. D., August 7-9, 1928.

Our phase of the whole situation is a little different, and, to be frank with you, we are going to try to demonstrate to you that there is a lot of good in it, and, too, that there is a lot of bunk in it.

We have an attendant who gives baths all day long. I know nothing particularly about our water except that we get it from the springs and it is full of iron and magnesium salts. The greatest value of the water is that it gets them clean. We have no elixir of life here at all. There is no sulphur, there is no organic matter in the water; it is just clean, pure water, and we use it for the baths. We electrify it, and our bath man will tell you about that.

We are not going to give any treatment with the lamps that you see on the stage. You are familiar with them and are privileged to ask questions of our technician.

We have a large diathermy machine that weighs 1,500 pounds which we could not bring to the platform. It is in use practically all day every day. It hardly has time to cool off from one day to another.

It has been my privilege to attend three physical therapy courses. In one talk I am going to give you what I got out of those three courses. You can string it out over three weeks if you want to, and then if you care to pay me $35 I will be glad to take that too. (Laughter.)

I assure you that I pride myself on the fact that I am not dumb, though my wife says that I am, and I want to tell you there is a lot of bunk about these things. It is advisable to know the facts.

Heat.—We understand that heat in any form is relaxing. A great many doctors say they can do as much with a hot water bottle as they can with a dose of morphine. Heat is divided into the heads of dry heat, baths, and things of that sort.

Exercise.—You men in the office have not time to strip your patients and take them through all forms of exercise by natural methods, so you must use other means.

Massage.—This subject does not mean very much to you unless you have in your office a trained masseur, because there must be long periods of treatment to stir up the muscles and give new life, if possible, by manipulation.

Under the subject of massage I should like to take up for a moment osteopathy and chiropractic. Osteopathy is no more nor less than a highly developed type of massage. I can look any osteopath in the eye and tell him that, because I have gone to osteopaths and taken their treatments, and I have read a great deal of their literature.

On one occasion I was in Grank Forks, North Dakota, waiting for a train. I had a couple of hours so I went to call on a dentist. He was not in, but next door to him was a chiropractor who had all the paraphernalia that Dr. Cottam told us about last night. He had everything to attract the eye. I decided I would go in and spend $2. I walked in and said, "Good morning."

He said, "What is the matter with you?"

I said, "My spine aches, and I have headaches."

"Don't you know that your spine isn't adjusted? There is something wrong with your spine. Every disorder of any kind can be traced to something of that sort."

I said, "I can't stay very long, so I will have to have one treatment that will do me a lot of good. How much will you charge me?"

"Two dollars."

I gave the girl $2 and went into the office. He put me on a chair and started to play with my spine, and finally he said, "Aha! Just feel this up here."

He had me all twisted around with my head bent over so that when I felt the back of my neck I felt a big bump, and I said, "My God! There's a bump up there. Is that vertebra out of place?"

"Aha," he said, "You have diagnosed your own case. Man, how have you lived all these years with that bone sticking out that way?"

I said, "Search me, I don't know. I know I feel badly enough."

"Come in, we will lay you on the table."

He took me into a room where there was an ordinary table and laid me down on it and said, "I want to use relaxation. Take a long breath."

Then he got one thumb on each side of that vertebral prominence and gave me a shove and I said, "Yep! I feel better."

Then he held my head back and told me to feel the difference, and of course I couldn't feel anything. I had my spine adjusted and got my two dollars worth from somebody who didn't know anything about it.

Water.—Water is something about which you will have to draw your own conclusions. You remember that our patients sometimes drank Rapid's microbe killer. I suppose it had chlorin gas or something like that run through it. They may have medicated the water, but I question it. At some of these springs that smell badly, I think the principal virtue is the horrible scent. There is certainly a psychological effect about going to a sulphur spring, holding your nose, and drinking the water.

I can not say that at Hot Springs we have water that contains the elixir of life. I do think we have nice, good, pure water, and that it will make you clean.

Electricity.—The principal subject with which we have to deal is electricity. Electricity is a form of energy about which we do not know very much, but we can control it more or less; we have it under our hands so that we can get results from it.

We start with the sun. When the ray is so long that you can not see it, it is heat; when it is so short that you can not see it, it is ultraviolet or power; when it is between those two, we have sunlight.

We are going to take the Angström unit, or a ray of sunlight, and filter it out to show you what happens. A certain amount of the sun's rays never strike the earth because of the impurities of the atmosphere above the earth's surface. That is the reason, I suppose, that in the city of New York there is always a haze and they claim that the children are anemic and tuberculous because the rays do not come through that dirt as you would expect them to in Hot Springs.

Here we have a ray of sunlight and the spectrum with the ordinary colors of the rainbow,—red, orange, yellow, green, blue, violet, and indigo.

Are you susceptible to any of those colors? Isn't there some energy in one of those colors that has an effect on your body? When you think of red, don't you think of something fiery. You put red in front of a bull to irritate him. If you put orange or green in front of a bull he probably would lie down at your feet.

When we see the heavens, a delicate blue, we feel comfortable. . Orange has a soothing effect on the system.

The spectrum is divided into the visible rays, the ultraviolet, the *x*-ray, and a peculiar region about which scientists have not been able to find out much that they call the cosmic area. Some of our grandchildren probably will fuss with that region and develop something along that line. At the end we get up into power, and we have the radio. We have here infrared and diathermy. You understand that this is all sunlight in various forms of energy. Every one of those has something to do with physical therapy in the present line of treatment.

We start with diathermy. Diathermy is an application of energy between two poles. We put a diathermy pad, for instance, on each side of the leg, and the principle is that as these rays come into the tissues internally they begin a bombardment, which produces heat. Diathermy means the application or the introduction of heat into the center of the tissue, with a consequent relief from pain. That is a much mooted question. Some of the workers in this line will say that you do not get an increase of the temperature of the tissues inside. We know that the patient feels warm.

We claim that heat first relieves tension, second that it starts a mild hyperemia, and that changes occur that have a healing effect.

One important thing to remember is not to put diathermy on a place where there is pus that does not have an outlet. You have a proliferation and a sort of bubbling over, with no place for the pus to get out.

Infrared will be explained later with the lights.

Ultraviolet is a powerful light, which we will explain later.

The *x*-ray is another form of energy. We do not give very many *x*-ray treatments here, so I cannot tell you anything very definite about it. We have no cancers. We do not attempt to use *x*-ray in our skin cases or blemishes because we have lots of time and can use the other methods of treatment.

We do not have radium here, but you are familiar enough with radium to know what the therapeutic effect is.

The effects of all these lights and appliances are: (1) Chemical change, the transferring or changing of ions in the system, (2) mechanical change, (3) heat.

Galvanism, faradism, static, and so forth are just manifestations of power. Galvanism is straight power; the interrupted or sinusoidal is power that goes one way, then switches and goes back.

Some of the patients have very kindly consented to come to the stage, and several of our technicians are here to give demonstrations. One of our technicians has been giving the baths for years. He knows what results we get and can answer any questions.

TECHNICIAN: Our electricity bath treatments are principally for rheumatism and neuritis, arthritis, and so on, with which we have good results.

Question: What is meant by electric baths?

Technician: Hot and cold water with electric current.

Question: Faradic?

Technician: Yes.

Colonel Lindner: It is a continual flow from one pole to another through water.

Technician: Besides the electric baths we have the overflow whirlpool baths for nervous cases, the water being hot and cold.

Question: How hot do you use the water?

Technician: About 100° to 108°. It depends upon the direction given by the doctor.

Question: How long do you give them?

Technician: All the way from ten to fifteen or twenty minutes, depending upon the patient.

Question: What do you do after you take the patient out of the bath?

Technician: We put him to rest. In the rest-room we have a row of beds or cots on which there are blankets. We wrap them in the covers and give them a bed rest. Then we take them into the needle spray and give them a good shower, have them rubbed down, and they retire.

President Hohf: What attention is given to focal infections, such as bad teeth and bad tonsils?

Technician: The doctors take care of that. The bath department is only for baths, which the doctor directs.

Colonel Lindner: Based on your experience over a number of years, do you consider that you get good results from baths?

Technician: We do get good results.

Colonel Lindner: That statment means a great deal because he sees the patients when they come in and when they leave. We believe there must be something in the bath treatment.

Technician: We have one patient here who came in with a diagnosis of arthritis of the spine, ankylosed spine. I have given him treatments for a number of weeks. When he came he could not move his head; he could scarcely get up and down. Now you can see his condition; he can turn his head any way, and he can bend. He has gained in muscle and physique and is a well-built young man.

Colonel Lindner: This is a case when massage would be contra-indicated. A chiropractor would break his back.

The next technician gives all of our light treatments. Do you get good results?

Technician: In most cases. There are a few cases that do not respond to treatment, but as a rule we get good results. Most of our treatments are very beneficial.

Colonel Lindner: That is with the diathermy machine. We also have the water-cooled machine.

Question: On what type of cases do you use diathermy?

Technician: We use it in arthritis cases.

Question: In a case of neuritis of the arm, what technic do you use?

Technician: If it is in a joint, we use direct diathermy with electrodes—high-frequency current through the joint. If it is in a muscle, we treat it with diathermy through a vacuum tube, using the infrared treatment.

Question: Do you treat any neuritis cases?

Technician: Yes, we use the vacuum tube in those cases.

Question: You do not use the diathermy with the electrodes?

Technician: No.

Question: How do you apply it? Is it applied along the path of the nerves?

Technician: We have been arcing it, holding the electrode at the distance the patient can stand; the spark will jump across an inch if the patient can stand that when you follow along the nerves.

Question: What is the difference in regulating the spark gap?

Technician: It increases or decreases.

Question: How frequently do you treat these cases?

Technician: We find that treatments every other day are more successful than daily treatments.

Question: In what percentage of neuritis cases do you get any benefit?

Technician: Around 60 per cent.

Question: In those cases do you get good results?

Technician: Yes.

Question: Do you mean temporary good results or permanent good results?

Technician: I can not say whether they are permanent or not. When the patients leave here as a rule they are benefited. Sometimes we get them back; sometimes we do not.

Question: A large unmber of cases do come back, don't they?

Technician: Yes.

Question: Do you make an effort to locate the cause of the neuritis?

Colonel Lindner: The doctor does that. The doctor is supposed to be the guiding spirit. He simply sends the patients to a department for application of treatment.

Question: Do you usually get relief from pain after treatment, or does it increase pain?

Technician: It is soothing; noticeably so.

Question: Do you use diathermy in pneumonia, and, if so, with what results?

Colonel Lindner: We do not have any pneumonia here. We have not more than one or two cases a year.

Question: How do the doctors know whether to send the patient to the electric baths or to the diathermy department?

Colonel Lindner: That is a matter of discrimination on the part of the doctor, and after a while the patient begins to mooch around a little to see which he likes better.

Question: It was stated a few moments ago that the *x*-ray showed ankylosis of the spine. I should like to know if there has been an *x*-ray made since the treatment and if it shows actual change in the pathological condition.

Technician: As far as the vertebræ are concerned, if there is a change from time to time, it is a little worse if anything, but I believe the treatment acts on the muscles rather than on the bone, and the patients get the results from the muscular benefits.

Question: I should like to know about the technic in the early treatments.

Technician: That would depend upon what you are treating. If you want to produce erythema in cases of skin trouble, for instance, you want to get at a close range and secure possibly a second degree erythema at eighteen inches for three minutes as a starter. That is a pretty stiff dose. When you give the treatment you have to tell the patients that it will burn or they will come back after seven or eight hours with a very red skin and think they are going to die. For a tonic dose you would use thirty-six inches for three minutes on the average patient. A dark person can stand about double the treatment that a light person can stand.

Question: Is any attention paid to diet while these patients are under treatment?

Colonel Lindner: The relation of diet to the application of external heat is a new thing to us.

Question: I understand that certain drugs taken internally when the patient is exposed to ultraviolet rays produce a greater effect than is obtained without the drugs. I wonder if you have had any experience with that.

Technician: Quinine is one such drug. If you give ten grains of quinine to a patient who does not respond to the treatment, administering it possibly twelve hours before treatment, you can get a good burn. It is dangerous to give too much because you can make the body luminous with ultraviolet.

Question: I asked that because it is a subject that could be studied. I think it is a field for investigation.

Lieutenant Charles M. Griswold: We are very fortunate to-day in having Mr. Holmquist with us, and I think he will answer in his talk all of the informal questions which have been brought up on the more technical side of this subject. (See The Journal-Lancet for November 1, 1928, page 498.)

Question: Do you feel there is any therapeutic action of the infrared other than the heat?

Technician: I do not think so. The infrared is practically all heat.

Question: In what kind of cases do you use the ultraviolet ray?

Technician: In skin diseases. We have some cases of psoriasis. After the treatment the skin will stay clear for possibly ninety days, and then it will start to come back. After another course of treatment, the skin will be clear for another three months.

Question: How often do you give these ultraviolet treatments?

Technician: As a rule, every other day; in some cases every day.

Question: Do you get any results in cases of anemia?

Technician: I have never followed such a case. There is no question but that there is a tonic effect in the light that will build up a person.

Question: In the case of a bed-sore or any infection on the skin, what light do you use?

Technician: Ultraviolet.

Question: With what results?

Technician: With excellent results.

Question: What is the rate of exposure?

Technician: You start at a minute and half at thirty-six inches and gradually increase to ten minutes.

Question: What exposure do you use in the case of psoriasis?

Technician: General body radiation, gradually increasing to fifteen minutes every day. If you cannot get certain spots off with that treatment, give intensive treatment with the water-cooled ultraviolet.

QUESTION: Have you had any experience with ulcers in old people? If so, what sort of technic do you use?

TECHNICIAN: We give a general radiation, what you would call a tonic dose.

QUESTION: Do you give body radiation as well as local?

TECHNICIAN: Not always. Where there are sores on the legs, for instance, we treat locally.

QUESTION: How often?

TECHNICIAN: Every other day. Treatments for a period of about two weeks generally show excellent results.

QUESTION: Could you start with a small dose and gradually increase it?

TECHNICIAN: Yes.

QUESTION: Do you use the Kromayer lamp with the quartz applicators?

TECHNICIAN: We use the Burdick water cooled. It is practically the same, but is made by different manufacturers. Kromayer's is a water-cooled ultraviolet. We use the Burdick.

QUESTION: Do you have the quartz applicators with it?

TECHNICIAN: Yes:

QUESTION: Do you use it for intraoral work in the throat and nose?

TECHNICIAN: We use it in the nose and in sinus work.

QUESTION: With what results?

TECHNICIAN: Pretty fair, the results are good.

BY LIEUTENANT GRISWOLD

Physiotherapy is as old as medicine. Our forefathers who practiced medicine knew the value of heat, cold, massage for lame joints, and all of those things, but, unfortunately, up to the present time the knowledge has not been standardized.

To-day we are going to have a lecture by Dr. Holmquest, with whom I had the pleasure of having a little conversation this morning about the standardization of physiotherapy. We are using it here and no doubt you are using it in your offices largely in an empirical manner. Eventually it will be down to a point where we can prescribe it the same as we prescribe a dose of drug, with the expectation of getting certain results.

We all know that heat properly applied will relieve pain and will reduce congestion. There is one surgeon who claims he is getting away almost entirely from anodynes and hypnotics after surgical operations by using extremely hot foot baths and heat applied to other parts of the body. He says that in the vast majority of cases he relieves the pain almost entirely. Whether that is true or not I do not know.

There is a great deal of benefit in hydrotherapy. There is no question but that it is a wonderful thing. The Seventh Day Adventists who handle the Battle Creek Sanitarium and its offsprings, such as Boulder, in Colorado, in my judgment go too far with their water treatment. We must be very careful in using any of the physiotherapy methods, not to overdo the matter. If you use too much of ultraviolet or other lights you get a condition similar to the one we get in genito-urinary work, a Wassermann-fast condition, you stop building up the blood and hold it fast.

Years ago, before we knew so well how to handle the *x*-ray, we got a great many burns that were very serious. Some of my friends in the early days lost their lives, some of them were maimed, some lost their fingers from *x*-ray burns. We have to be very careful in handling these things.

In the Colorado General Hospital, in Denver, which has a very large psychopathic department, Dr. Ebaugh, the superintendent, told me a couple of years ago that for several years they had not used a hypnotic of any kind in the treatment of mania of violently insane patients, but relied entirely upon a neutral bath from 98 to 100 degrees, and that six hours was the longest they ever had to keep a patient in the bath until he was quiet and would go to sleep. That certainly is a great improvement. We know that in typhoid fever, pneumonia, and other serious illnesses, a cool sponge or a cold bath is safer for reducing the temperature than any of the depressant drugs that we give.

We have among our older men here a great many warts and moles and conditions that look like the beginning of epitheliomas. We take off a great many of them with surgical diathermy, using the spark.

It is very difficult for us to follow up a case for any length of time. Our men are here for a week or a month and then are gone. We have no follow-up system. We give them what relief we can and that is all.

I had a rather long and strenuous period of two years of private practice during which I learned one little thing, namely, that the patient for whom you do something in the office stays with you better than the patient for whom you simply write a prescription. If you use your instruments to examine the eyes, ears, nose, and throat, give a little electricity or massage, or, in the gynecological cases, place a tampon, or perform some personal act for the patients they are better satisfied. In my judgment, the chiropractors and the osteopaths and the other cultists hold their patients largely because they do something for them, not because they do any better work, but because the patients think they are getting something.

We get two distinct benefits in our physiotherapy work in this institution. The first is the physical benefit. We have had a number of cases that came to us with arthritis or rheumatic fever, unable to get out of bed or to move, and in a very few days they were comfortable. We know we can do those things. We get almost immediate relief in many of our neuritis cases. We have a very different type of case from that most of you men have. Almost all of our cases are old chronic cases that have gone through the gamut of all kinds of treatments. We get the deformed joints, we get the Charcot joints, we get cases of osteo-arthritis, and everything else under the canopy of heaven that the average practitioner does not get; he may get them, but he does not keep them or have to treat them one day after another.

We get some real physical benefit in these cases, but just as in the instance of the osteopath and the chiropractor, we get the mental effect. These men believe they are getting something, consequently they are satisfied and are much more content than if we did nothing for them.

Case 1.—This case was diagnosed neuritis of the right leg. Treatment was diathermy every day for thirty days, started June 25, terminated July 25. Patient much improved.

Case 2.—This man came in with a general dry eczema all over his body, and he almost had to hire a little colored boy to go along and scratch for him. Treatment was ultraviolet rays for thirty days, started June 15, ended July 15. He received fifteen treatments. He stopped the treatments of his own accord, and his skin has cleared up. He will tell you that it was salt water that cured him. He asked me if he could take some salt water baths along with the other treatment; he said it relieved him so I told him to go ahead. You may use your own judgment whether it was the ultraviolet ray or salt water that cured him.

Patient: It is a little unusual to stand before a lot of professional men and try to tell them anything about a matter that they disagree upon as much as politicians disagree upon the tariff. I was cured of eczema here twenty years ago. I did not take the treatment in the Sanitarium. I took it outside. I was cured for about a year. Then I went to a doctor in Leavenworth and asked him if he could cure eczema. He said that he could not do it by giving medicine or rub-ons of any kind but he could give me hypodermic injections. He gave me twenty-five treatments by injection for two months, treating me every other day. The eczema disappeared from the surface in ten weeks. But it came back. I think if it had been followed up then I would have been permanently cured. I came up here on the fourteenth of June with a case of eczema which was enough to run anybody crazy. I could get no more than two hours sleep at night. I took these treatments for fifteen days. Then there was a little intermission in the treatments, and I took a salt-water bath from which I got such immediate relief that I asked permission to have salt-water baths. I put four pounds (two sacks) of table salt in the bath tub, with four or five inches of hot water. I got in and rubbed myself with the salt. In ten days I was free from all itching. I am now perfectly free from eczema. If I were to recommend a treatment for eczema I would recommend a hot salt-water bath. (Laughter.)

Lieutenant Griswold:

Case 3.—This gentleman came in with an intense pruritus ani. He was given ultraviolet rays daily for thirty days, every other day. He received one treatment and was entirely relieved. That is one of the cases where ultraviolet gave a great deal of comfort.

Question: Was that water cooled or air cooled?

Lieutenant Griswold: Air cooled in this case.

Case: 4.—This boy has a chronic hypertrophic arthritis of practically all the joints. How long have you been taking baths?

Patient: Off and on for about two years.

Lieutenant Griswold: Will you tell the gentlemen what your condition was when you started.

Patient: My joints were much larger than they are now, and I had pain in all of the joints.

Lieutenant Griswold: You have been using diathermy lately, haven't you?

Patient: Yes.

Lieutenant Griswold: Has that given you more relief than the tub baths?

Patient: Yes.

Lieutenant Griswold: This boy is ambitious. He has been working steadily on a job ever since he has been here.

Every joint he has is deformed. You can see that the wrist joints are enlarged, typical hypertrophic arthritis, but he has no pain now. He has been relieved enough to hold down his job and draw some money for it.

Case 5.—This case you have seen. He is a gentleman with ankylosis of the spine from the neck down. Did you have pain before you started the treatment?

Patient: Yes, I had. For about three months I could not sleep without a hot-water bottle under the back of my head, and that was filled about four times a night. I was also affected in my feet. That pain is entirely gone; also the pain in my shoulders.

Lieutenant Griswold: Case 6.—This man came here with a herpetic eruption on the instep of his foot. It was very painful and sore. He received four treatments of quartz light, and the eruption has entirely disappeared. A new place broke out, but that is practically well now. The herpetic eruption on his foot itched and burned until he could not be comfortable. He was almost immediately relieved.

Question: Where did you treat that?

Lieutenant Griswold: On the instep, treating the eruption itself.

Case 7.—This case is very striking. This man is a farmer who lives between here and Edgemont. I very much wanted to have him here this morning, but he said it was harvest time and it was impossible for him to come. My diagnosis was dermatitis herpetiformis all over his body, especially the flexor surfaces. He had had that for three months. He did not get any rest or sleep. He scratched until there was scarcely a natural eruption to be seen; he was one mass of scratches all over his body. After he received one ultraviolet ray treatment he slept all night. In two or three weeks time he went out absolutely cleaned up and has been well since. I saw him on the street two or three days ago. It has been two months or more since he left. He received no medicine, no applications of any sort except the ultraviolet ray, and it relieved him within eight hours from the time he received his first treatment.

Case 8.—For some months I have had under my care a case of a transverse myelitis, where the paralysis of the legs was absolute. He has some control of the bladder and bowel function. He has been unfortunate in that since he has no sensation in the limbs, he has burned himself with hot water three or four times. Of course the wounds are very slow to heal. We have used an infra-red light on him five or ten minutes a day and have kept the wounds dressed. They have all healed, which seemed to me quite a marvelous thing. He has been receiving galvanic treatment for his legs and arms, but he is such an optimistic fellow that he always reports improvement, no matter what you do for him, so whether there has been any real improvement I think is doubtful. There is nothing I can see particularly except the healing of the wounds.

Case 9.—This man had chronic lumbago. How is it now?

Patent: It is all right.

Lieutenant Griswold: What treatment did he take?

Technician: The electric tub.

Lieutenant Griswold: How long have you had that pain in your back?

Patient: Off and on for about three years.

Lieutenant Griswold: How long did it take you to be relieved?

Patient: I feel all right now. I came in here on the sixteenth, and I can take all the current there is in that thing and feel good.

Lieutenant Griswold: Case 10.—This gentleman had a diagnosis of left-sided paralysis. How long have you been taking treatments?

Patient: Four weeks.

Lieutenant Griswold: Have you been much improved?

Patient: I have noticed improvement, but I am not ready to go home.

Lieutenant Griswold: We brought these gentlemen here this morning to show you that we actually do get some results. We also brought some men who have not had very noticeable results. We work in an entirely different way from an outside doctor. If a man is not satisfied with the diagnosis and care that he gets here, the first thing he does, if he happens to be a World War man, is call up the American Legion, or, if he is a Spanish War man, the Spanish War Veterans, and they take it up with their congressman, and he takes it up with the Board of Managers, and next thing we know we get a scorching letter about the treatment of the man.

Our object and our plan is to please every man as nearly as we can, as well as to do good, careful work. These men are not paupers: they are entitled to their service, and we try as nearly as we can to give it to them.

In my judgment, the physiotherapy department of this institution is doing good work. I never had the facilities for giving any large quantities of physiotherapy treatments until I came here two years ago, and it has been very pleasing to me to watch and do the work. I have relieved my patients of things I was not able to relieve them of in private practice.

LACERATIONS OF THE PELVIC FLOOR AND THEIR SEQUELAE*

By J. D. McQueen, M.D.

WINNIPEG, MANITOBA

In selecting a subject to place before you an endeavor has been made to choose one of practical interest to all, a condition which the medical man in the country or in the city must contend with in its different phases almost every day in the year. It is a gynecological condition certainly but no apology is made for bringing the obstetrical field into prominence. We know that from 60 to 75 per cent of gynecological conditions follow inadequately treated pregnancies. No claim of originality is made, but simply an attempt is made to co-ordinate and stress essential principles which dovetail the gynecological and obstetrical field. Many details have been withheld, not from lack of interest, but in order that those which in my opinion are most important may not be lost in the maze necessary to cover completely a subject of this size.

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*Presented at the Forty-first Annual Meeting of the North Dakota State Medical Association, held at Devils Lake, N. D., May 23 and 24, 1928.

It is difficult for us even as physicians to appreciate the invalidism and misery resulting from laceration of the pelvic floor and its long list of sequelæ. The general practitioner, as well as the gynecologist, only too often has to apportion many symptoms of ill health as due or not due originally to a condition of pelvic relaxation. Only with a thorough understanding of the anatomy, physiology, and pathology of the organs and structures affected will proper decisions be made.

The levator ani muscle with its covering external and internal fascia is by far the most important factor in the main pelvic diaphragm or floor. This muscle, as you know, is paired, and each can readily be divided into three portions, often known as the pubococcygeus, iliococcygeus, and coccygeus muscles. These names give a fair idea of the origin and attachment of the muscle fibres. The pubococcygeus or anterior portion is most important, arising, as it does, from the upper ramus of the pubes, sweeps downwards and backwards, is fixed to the perineal body, attached to the sphincter ani, is in close relation to the walls of the vagina and rectum and joins its fellow behind the rectum in the ano-coccygeal ligament. The iliococcygeal portion arises from the lower pubic ramus and from the "white line," and like the anterior portion strengthens the walls of the vagina and rectum and is inserted into the ano-coccygeal ligament and to the coccyx. The coccygeal portion arising from the spine of the ischium spreads in fan-shape to be attached to the coccyx.

Lying between the vaginal outlet and the anus, is a musculotendinous "spot" or perineal body into which fibers from the levators and transverse perinei blend. Studdiford has stated that involuntary muscle fibers found in the perineal body play an important part in anchoring the anterior fibers of the levators, the transverse perinei and anterior portion of the sphincter to this perineal body.

The triangular ligament pierced by the urethra and vagina is made up of two strong layers of fascia, stretched across that anterior portion of the pubic arch, and forms support for the anterior pelvic outlet or urogenital trigone. Between the layers of fascia lie the deep transverse perinei muscles, the fibers of which decussate in the midline and merge into the perineal body.

These structures described may be considered as forming the pelvic floor or diaphragm. Above, supporting the uterus and other pelvic organs, is what is sometimes called the upper pelvic floor, made up of unstriped muscle tissues arising from the obturator fascias and attached to the sides and anterior aspect of the cervix. Posteriorly the uterosacral ligaments tend to fix the cervix to the sacrum. Perivascular connective tissue within the broad ligaments and the fascial layer under the bladder running from the pubes to the cervix all form a sling whose function is to maintain the uterus and bladder at the normal level.

Pregnancy and parturition are the main original factors in the causation of pelvic lacerations and relaxation. The word "pregnancy" is used advisedly, for much damage may follow abortion or miscarriage when some, at least, of the causes discussed under parturition come into play. True, we may have developmental defects as in Spina Bifida Occulta, or we may have the occasional patient whose nervous and motor systems are so much below par that the pelvic diaphragm can withstand little extra pressure from above. Syphilitic lesions may destroy the pelvic supports, but our main object is to consider the common cause and its result.

Soranus, eighteen centuries ago, was the first to advocate support of the perineum during delivery of the fetal head. Some to-day may well question this advice, if carried to extremes. Delivery of a full-term baby with absence of abrasions, inside and outside the vulva, is an accomplishment worth while, provided in so doing we have not sacrificed our supporting structures. This brings up the whole question of episiotomy. It is my opinion that the prolonged pounding of a fetal head upon the pelvic floor is bad for the patient locally and generally. De Lee, in Chicago, whose work has been amongst a younger and healthier class and Munro Kerr, of Glasgow, amongst an obstetrically poorer class, have both come to the same conclusions regarding the results to the pelvic floor in prolonged second stage. They both favor episiotomy to overstretching or laceration. That a laceration well repaired at once will give a better end-result than a prolonged overstretching of the muscular and fascial supports of the pelvic floor is my belief. A clean cut is more easily repaired than a ragged tear. We all have noticed during the second stage the anterior fibers of the levators as they curve inwards under the stretched skin towards the perineal body. We all can see the space between this pair of muscles increase. There must be a limit to which the involuntary binding fibers before mentioned can be stretched; if that limit is exceeded we lose full use of the levators for the future. Loss of attachment of these muscles to the central perineal body and anal sphincter means loss of support for the vulnerable anterior portion of the pelvic floor whether or not there has been actual laceration of the mucous membrane or skin.

What is true of the anterior portion of the levators is true of the iliococcygeus and its strong fascial coverings. Any overstretching or detachment from their midline anchorage will result in a loss of a great part of their function in supporting the vaginal and rectal canals.

Involution, a term unfortunately only too often understood as referring to the uterus alone, does take place in the muscular and fascial supports in both upper and lower diaphragm, and if given an opportunity will often improve greatly what at first appeared severe relaxation.

A first-degree tear involving, as it does, only the fourchette should have little effect upon the function of the levators.

A second-degree tear extends through the perineal body or anterior levator fibers; in either case this muscle recedes from the midline.

A third-degree tear extends through the sphincter.

In the last two types the muscular and fascial attachments of the walls of the vagina and rectum are involved. The ability of the levators to lessen the width and draw forward the vaginal slit against the symphysis is gone, and with it the ability to counteract increased pressure from above.

The results of laceration of the pelvic sling are immediate and remote. Infections local and general with their far-reaching possibilities may originate in the open wound. Complete laceration of course is more likely to be followed by extension of the infection upwards in the genital tract. The loss of anal sphincter action is a tragedy, and until repaired the patient is condemed to a life of misery in her home and one of forced uselessness in society.

The intact pelvic floor and diaphragm help to maintain intra-abdominal tension and so indirectly help to keep abdominal organs in their proper position and level. With a gaping relaxed outlet however and only the upper diaphragm intact it is inevitable that sooner or later the fascial supports will stretch and the pelvic contents descend.

Parturition, the most common cause of defects in the lower pelvic floor, at the same time causes a stretching or overstretching of the immediate supports which go to maintain the uterus at its normal level. Lacerations in and around the cervix, separation of the fascial sling under the bladder, stretching of the uterosacral ligaments—all tend to retard involution and indirectly tend to favour backward displacement of the heavy uterus. Pressure from above is directed upon the anterior surface of the uterus, the uterine buttress is gone in front, the bladder tends to bulge through its separated supports, while the uterine body lies in the axis of the vagina with its cervix pointing towards the vaginal outlet. With descent of the uterus, the posterior vaginal wall tends to bulge forward and downward. Without adequate support from the pelvic floor all these conditions become worse, resulting in what is usually called cystocele, rectocele, and prolapsus uteri. Repeated pregnancies, heavy work, and time aggravate the condition and a procidentia may eventually develop.

Cystitis is frequently associated with a cystocele, the result of the constant presence of residual urine. An upward extension of this infection may result in a greater discomfort and danger to the patient in the form of pyelonephritis.

The downward and forward protusion of the rectocele invariably causes difficulty in defecation, constipation, and hemorrhoids. Straining to empty the bladder and rectum gradually enlarges the cystocele and rectocele and with the increased pressure from above, further descent of the uterus is bound to follow. With any degree of prolapse of the uterus there are bound to be anatomical and circulatory changes in the broad ligament. The course of the ureters may change, kinking and dilatation may occur. The venous flow is impaired with resulting engorgement and varicosities, a condition of pelvic congestion with all its local and general effects only too well known.

Naturally the patient with pathology as above pictured will have complaints and disabilities. She will complain of fatigue, her duties will have become too heavy for her, a constant drag and weight in her lower abdomen with backache is a most constant complaint. Menstruation most likely will change—menorrhagia—irregular and sometimes painful. The bowels and bladder will be a constant source of distress. Her general health will suffer. Just how much ovarian function is changed is difficult to judge, but undoubtedly the endocrine balance must often be upset. Last, but by no means least, is the effect of all this upon the nervous system. We can only surmise the number of women whose lives of introspection, complexes, and neurosis start as these pelvic conditions force them to fall behind in the home and community struggle.

For these cases it should be our effort properly to allocate local and general disabilities and to promote the return to normal with proper treatment.

Treatment.—Preventive treatment should always be the most satisfactory for the patient and physician. The condition under consideration is no exception to the rule. Lacerations and relaxations are inevitable at times during parturition and demand immediate and thorough repair, but these times will appear less and less frequently with a better understanding and appreciation of the art and science of obstetrics.

In prevention, some of the obstetrical "don'ts" I would suggest are the following:

Don't allow bearing down during the first stage.

Don't use forceps injudiciously (high or through incompletely dilated cervix, or with full bladder.)

Don't allow the head to pound too long against the pelvic floor.

Don't fail to repair a laceration, keeping in mind the essential supporting structures.

Don't use pituitrin until after birth of the child's head.

Don't do an early Credé and push the uterus to the outlet.

Don't neglect to give p.p. care and supervision.

Curative treatment.—This will be the building up of the general health combined with palliative or surgical local treatment. Some of the main factors which guide us in our choice of local treatment are age of the patient, general health, degree of destruction to the pelvic floor, degree of descent of the pelvic organs, severity of symptoms, degree to which the patient is incapacitated, and the type of duties expected of the patient.

The building up process may require to be brought into play the very best in practically all branches of internal medicine to-day, from the most adroit investigation of neuroses to the routine supervision of daily activities and diet.

Local treatment for the most part will be operative. Only for prevention, temporary relief, in extreme age or severe constitutional disease, should mechanical supports be used. The use of pessaries on the whole is disappointing to both patient and physician unless both realize from the beginning that their use is a temporary expedient.

Operative measures (their numbers are legion) should endeavor to restore as far as possible the anatomical supports in the pelvic floor and in the upper sling which holds the pelvic organs at their proper level. It is essential that both pelvic floors be restored. The uterus if retained must be suspended or fixed, anything less is doomed to failure. Cases must be individualized and the type of operative procedure used most likely to give security and function. Security will be the main object in cases near or past the menopause.

"Below-par" patients are the ones to suffer most from loss of pelvic support, and immediate return to normal following operative treatment must not be anticipated. As in many other conditions, operative measures must be considered as a step only—a great one in most cases—towards the healthy, happy woman able to take her place again in the home and community.

DISCUSSION

Dr. S. A. Zimmerman (Valley City, N. D.): I wish to thank Dr. McQueen for bringing us this very comprehensive review of the subject, condensed in such an admirable way. The subject is too large for one small paper, but the essayist did very well in bringing so many of the things into this fine paper.

I shall refer to only two or three things in the way of slight emphasis. All of us here to-day are no doubt responsible for many of the ills the Doctor mentioned, because of our failure to do the things he brought out properly. One thing we must do, and that is to repair these tears at once. The important point is not to bring together just the mucous membrane, but to get down to the underlying muscles that are so important. If we simply bring together the mucous membrane we do more harm than good The thing Dr. McQueen emphasized is that we must get down to and unite the parts that are so essential and bring them back into normal position.

The next point is that more of us should have the courage to do an episiotomy when necessary. When there is a large head to be delivered through a small outlet, something will have to give way, and if we have the courage to do an episiotomy and make a definite, clean-cut incision and then unite the parts where they belong, we will have done something that is worth while.

Dr. McQueen mentioned several "Don'ts." All of them were good, but one struck me as being rather unusual, and I have not lived up to it. He said, "Do not use pituitary extract until after the head is delivered." If we would live up to that I think we would use very little pituitary extract. Pituitary extract has been of great use to me in the last ten years. I have done only three forceps deliveries in ten years. Two on account of contracted pelvis, and in one case I thought the baby would die if I did not deliver the child at once. I use small doses of pituitary extract when I have a multipara, and the case is slow, and I want to shorten the time of labor. I give one half to one c.c. of pituitrin and shorten the time greatly. I use it sometimes in primiparas, when there is a completely dilated cervix and the pains are slow and weak. I use small doses of pituitrin and then give chloroform to slow up the action in order not to force the head out too quickly.

I think pituitary extract does much in saving time, and I think it is often indicated even in primiparas where the pains are insufficient. I would rather use pituitary extract than apply the forceps.

Dr. Richard H. Beek (Lakota, N. D.): I think the paper Dr. McQueen so ably presented was well worth our attention. If for nothing else, it causes us to pause for a moment and take stock of the things we are so familiar with they do not impress us.

To an extent the repair of the pelvic floor should be begun in the prenatal stage. We have often seen, and shall continue to see, women come to labor with the tissues water-logged, with the tissues improperly prepared to deliver the uterus of the products of conception. With the products of pregnancy there is a physiological hypertrophy that takes place within all the tract. The blood vessels increase, the uterus enlarges, and, as Dr. McQueen showed us, the muscles themselves get thick and heavy getting ready to deliver the baby. Nature knows that there will be a time when the child must be delivered and must be driven through the genital tract of the mother, and, in order to do this, particularly in the primipara, there must be power to do it. Many of the tears are obtained because there is a powerfully activated uterus pounding the child's head down into the cavity, over the pelvic brim, and so into the world, and if we are alive to our duty and can get these patients, which oftentimes we cannot, to come to us with the advent of pregnancy, and guide them all through the term we can accomplish much.

Another way to prevent the tears is to pay careful attention to the delivery of the posterior shoulder. Many times the little head comes down without much damage, and the anterior shoulder will be delivered, but with the delivery of the little sharp elbow the perineum will be torn.

Like Dr. Zimmerman, it has been my understanding that pituitrin is to be given before the birth of the child, when the pains are not of sufficient expulsive force, and I usually do this. I usually give one-quarter c.c. and in three-quarters of an hour perhaps use it again. I have in times past had to apply forceps in an incompletely dilated cervix, and in an elderly primipara where the bag of waters was lacking; and where the head was called upon to force the cervix open, I have put on forceps with the cervix not completely dilated. Since using the pituitrin I have had less trouble and have delivered the patients more easily.

I must claim close friendship for pituitrin, but I also realize it is a powerful drug.

Dr. McQueen (closing): I wish to thank Dr. Zimmerman and Dr. Beek for their remarks.

One thing we differ on is the use of pituitrin. I feel rather strongly about this, not only in the matter of lacerations, but its use in obstetrics altogether. This is not the place to discuss it, but I consider pituitrin more than any other one thing (inadequate obstetrical teaching not excluded) has caused more stillbirths in Canada than anything else. This stand is taken not only for the baby's sake but for the mother's. Certainly with an undilated cervix I think we are asking for trouble if we give pituitrin. Objections to its use are lessened after the cervix is completely dilated, but they still exist during the second stage.

DISEASES OF THE EYE*

By Harold Gifford, M.D.

OMAHA, NEBRASKA

I shall try to say something that will be of a certain amount of interest and perhaps a small amount of profit to the audience. I shall confine my remarks to a few very common things.

The first thing I want to speak about is chalazion. You all have a chance to operate on chalazions, but it is my experience that there are not very many men in general practice who tackle them. Of course, they are exceedingly simple things to treat.

The chalazion is made up of granulation tissue originating in a stopped-up and inflamed meibomian gland. Superimposed upon this slow, chronic inflammation which produces the granulation tissue, there often is a suppuration. An ordinary chalazion is a little smooth tumor that does not give any discomfort for an indefinite length of time, but when it comes to a secondary infection and they have what is called "a stye," they come around and want to know what is the matter. If you open it and let out the pus, you may not do very much good; you relieve the immediate emergency, but you do not do much permanent good because the groundwork of the thing remains.

The chalazion undergoes a natural resolution in a great many cases, so when you see one of these tumors, you can always tell the patient that there is no hurry about operating, unless it is already actively suppurating. Most patients are afraid of any kind of operation, and if you jump on them right away and say they must have an operation, even though it is a slight one, they will shy off and go to someone else, whereas if you tell them if they will rub it night and morning with a little vaseline it may go away, they will feel much happier about it. That is the story I generally give these people unless they have come from some distance and cannot get back very quickly.

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*Stenographic report of an informal address presented before the Forty-seventh Annual Meeting of the South Dakota State Medical Association at Hot Springs, S. D., August 8 and 9, 1928.

I never open chalazions from the outside, or practically never, as some people still do. I was taught that the thing to do with a chalazion is to open the skin from the outside and dissect out the tumor. This is never necessary. It makes a nice little operation, but it is not necessary. Simply inject 2 per cent cocaine—enough so that you get quite a little bleb on each side of the chalazion and a little below or above, as the case may be, wait about five minutes, and then open from the inside. If you have some kind of a clamp with a fenestrum on one blade, you can slip that over the thing; you do not really need that; it is not essential, you can turn the lid with your fingers and then make a vertical incision into the tumor. You can actually see where these tumors are. When you turn the lid out, you see a little discoloration of the membrane. If you are not sure where it is, stick your knife in anyway, because if you hit the center of the tumor you will feel that it is soft, and if you do not hit it you can try again; it does not hurt to make a half dozen stabs.

The large chalazions are simple to operate upon. The smaller the chalazion the harder it is to find it and to strike the center. For scraping out the cyst, of course, some kind of spoon is of advantage, though it is not absolutely essential. You can use any kind of spatula; if you have not a spatula, hammer out a piece of iron in any kind of flat shape—anything to scrape out the interior of this cyst as well as you can. Scrape it out thoroughly.

But you do not stop there. That is where the books, so far as I know, fall down. They do not tell you the most important point in the treatment, namely, that after you have scraped out all the chalazion that you can, you ought to use your fingers to squeeze the tumor from the center toward the edge of the lid. You will almost invariably find that you have left quite a little granulation matter in the lid inside of the cyst, which your scraping instrument has failed to bring out. If you squeeze it with one finger on the outside and some flat instrument on the inside, from the peripheral edge toward the margin of the lid, working from the edge and the sides toward the margin, you will almost invariably squeeze out an extra amount of this granulation tissue, and at the same time you will very often discover that there are one or two other little chalazions right around the neighborhood of the first one. If you leave them you will get the credit for having missed them when they develop later, or the patient will say it is the same tumor which has come back. You will be able, by this technic, to strike those and to evacuate them, as well. Also, you will not infrequently evacuate two or three other meibomian glands which are infected. You will squeeze out the pus and perhaps a little granulation tissue at the same time you squeeze out the original chalazion.

When you scrape out one of these tumors and just tell the patient to go ahead, the cavity fills up with blood right away, the patient begins to feel for it, and finds he has about as big a tumor there as he had before. He does not relish that. You explain that it is just blood and will be absorbed, but the effect is not so good as when you squeeze the thing out in the way I have described and then have the patient hold a pledget of cotton against the tumor for about ten minutes to stop the bleeding. Then not enough blood fills up the cavity to make a secondary blood tumor.

I also want to speak of some of the common lacrimal duct affections, things that you all see and can just as well treat.

The first of these is the congenital occlusion of the tear sac. All of you, practically, who have been in practice long have seen one or more of these cases. The child has a suppuration; the parents say the eye is full of pus. Generally it is only one eye. Once in a while both eyes are involved. Where you have a congenital inflammation of the tear sac on both sides, you must look for syphilis; in other cases there is no need of that. The one-sided cases generally are simple things, due entirely to the lack of absorption of the membrane which closes the lower end of the duct. All that is required, in nine cases out of ten, is to probe the duct once, passing a probe clear down into the nose.

I do not advise you all to try that, but I speak of this condition because you may regard it as a conjunctivitis and treat it with various drops for an indefinite length of time without any results at all, whereas if you recognize what the condition is, you will know how to handle it. If you are in doubt, let the case go over night without allowing the mother to manipulate it at all, so the tear sac will get well filled up with pus. Then take the baby's head between your knees, or, if you have a good strong man to hold the head on a table, all right, and expose the inner corner of the fissure and press firmly on the sac. If there is any pus in there, you are pretty sure to see it come out of the tear-points.

As I say, I do not advise men who have not had any experience with eye-work and who do not expect to follow it up to try to probe these ducts, because the probing of the lacrimal duct is a very delicate proposition and one which any man, no matter how long he has been in practice, is liable to make false moves in. What you can do is to tell the mother what is the matter and teach her to squeeze out the thing very vigorously several times a day and give her some zinc drops, or, if you want to use mercurochrome and get everything in the house all red, use that, that will sometimes cure it.

If you will clamp both canaliculi with ordinary forceps, and then squeeze from the upper and front part of the sac downward and backward, you will sometimes be able to force the pus right through the occlusion of the lower part of the duct, in other words, break this membrane by pressure from above, and in that way get just as good a cure and with much less danger of doing something wrong than if you try to probe the duct.

Some men have recommended injecting the sac forcibly. That sometimes succeeds also, except that it is a little more of a special manipulation for anyone who is not used to treating the eyes, and is a little harder to do; whereas squeezing down with the finger, trying to force the contents through the duct, is something that anyone can do, and there is absolutely no danger of your doing any harm.

You have a lot of cases come to you with pus in the sac. You can cure the case in the adult in the same way, sometimes, not by forcing it through, because there you almost always have some kind of stricture and forcing the matter through will not help you much, but by pushing the pus out of the sac, evacuating it very thoroughly and carefully five or six times a day and then putting in some zinc chloride 1 gr. to the oz. immediately afterward, you will sometimes get a cure; at any rate, you will make the condition of the patient much more tolerable, and some of them will say, "Well, this is good enough. I do not want anything more done."

Of course, they do not have a cure, but they are symptomatically improved, and they are fairly well satisfied, whereas if you start probing the ducts you have quite a job on your hands, and, while the results, if carefully done and carried out persistently and consistently, are often very satisfactory, you are liable to go wrong in probing the ducts; you never can be sure that you are going to do the thing just right, and you have to be prepared to know when you have done it wrong, because if you make a false passage, as once in a while happens, the thing to do is to quit. When you shove your probe in and find you have struck a lot of bare bone, and the thing begins to bleed through the nostrils, you can be pretty sure the best thing to do is to leave that duct alone for another week or two weeks before you do anything more except squeeze it out. If you do that, you will not do any permanent harm.

If you get in the right passage and keep there, you can teach the patient to probe himself in many instances. If the patient lives at some distance, you must not expect him to travel anywhere from five to fifty miles several times a month in order to get a cure by probing. If you take pains and do not allow the patient to scare you away by saying, "Oh, I never can do that," you can train him by making him watch you do it, with a looking-glass, to probe himself after you have opened the upper duct freely. The patient can get just as good results as you can, perhaps better, because he will take more pains with it and do it more regularly and more persistently than you will have a chance to do.

If you have decided that you are not going to try to cure the case by probing the duct, the question is whether you will destroy or cut out the sac or whether you will make one of the operations to establish a new communcation between the tear sac and the nose. Those operations are all more or less a gamble, in my experience. The trouble with making a new hole in the nose is that you leave there a bare edge of bone on which granulations spring up and which gradually fill up the new opening that you have made. The success of one of these operations for a new hole in the nose consists in getting a membranous covering for this edge of bone.

There have been a number of devices for accomplishing that result. Years ago it was suggested that you lay the sac out as if you were going to extirpate it, expose the lacrimal fossa, cut the hole into the nose, and when you strike the nasal membrane, draw that through, make a cut in the nasal membrane, draw it out into the open air and sew that to the tissues at each side of the hole that you have made through the nose.

I have never tried that. It is a somewhat difficult operation, and lately they have improved on that by sewing the membrane of the nose to the membrane of the sac. That is a neat sounding proposition and it no doubt is good, but I know by having seen other people try it that it takes a very long while and the results are not absolutely sure.

To compromise I have done this: I have turned the sac out, just as though I were going to extirpate it, and then made a hole through the bone into the nose, and then turned the sac into place and made a hole right through the skin and the sac into the nose with a small scalpel, turning it to make a cross cut in inner wall of the sac. Then I pack a somewhat wick-shaped piece of gauze through the hole in the skin, and then through the hole into the nose, and bring it down into the nose so I can gradually draw this wick out through the nose.

That will hold the inner wall of the sac in contact with the hole in the bone and protect the edges, so that in some cases of that sort you get very good results from that very simple measure.

Another phase of lacrimal disease is acute lacrimal cystitis. A patient will come in with a big lacrimal tumor, evidently with pus in it. I have had a number of those cases come to me when someone has known there was pus in it and that it ought to be evacuated, but the thickness of the tissue from the outside of the skin in to where the pus was, was sometimes so great that they were afraid to try it. A man who has not done that before will sometimes go in perhaps an eighth or three-sixteenths of an inch and get cold feet and quit before he has struck the pocket of pus. A good principle is to keep on going. Go in at the right angle of forty-five degrees, starting at the most prominent portion of the tumor, and keep on going until you strike the bone. Then you are sure to have gotten into the pocket where the pus is. Where there is a great deal of swelling and very little pus, that is a very good way to be sure you have struck the original pocket.

Having struck the bone with the point of your knife, you want to keep the knife in contact with the bone, and enlarge the opening that you have made in the outer wall of the sac by drawing the knife along first in one direction, then turning it in another, and then enlarging the incision in the skin quite well so as to be sure that you have a good sized opening that leads you clear down into the sac itself.

Having done that, the best thing to do is to put in a wire drain. I do not know that a wire drain is in common use at all, in fact I know fairly well it is not in common use. I mean by that that I do not know anyone who uses it besides myself. It is simply a loop of silver or copper wire, or any old kind of wire, of which you bend into something in the shape of the Greek letter omega. It has a couple of branches going out on either side to keep the wire from disappearing in the depths of the cut you have made, and it spreads out a little at the bottom so it is self-retaining. You push it in past the opening of the outer sac, and once it gets in there it will stay. If you keep on a salve or a moist dressing, the pus will keep coming out. If you keep this in for a day or two, with vaseline or zinc ointment or some dressing of that kind, by that time the suppuration will stop and the swelling will go down so you can investigate the condition of the duct and of the sac and decide whether it is necessary to probe the duct or simply evacuate the pus.

In some of these cases, all you have to do is evacuate the pus and keep it open in this way for a few days, and nothing more happens.

Generally, however, these conditions occur in cases where there is a chronic stricture of the duct, and you have to probe the duct or do something else.

Just a word as to whether you had better excise the sac. I do not suppose any of you would excise the sac except those who are doing that kind of work. Instead of excising the sac, for many years I have destroyed the sac with acetic acid and have kept on doing so.

I want to say a word about the means of determining when a cataract is ripe. I find that the directions which are given in the books as to the appearance by which you diagnose the ripeness or maturing of the cataract are not very easily understood. That is one of the first things that students fall down on and fail to understand. Men who have been in practice for a long while do not understand it.

It is really a rather difficult thing to determine by the looks of the cataract whether or not it is ripe.

The test which you are generally told to apply is to throw the light in from one side. By the way, always dilate the pupils for a case of this kind. You can not tell much about a cataract without dilating the pupil. Then when you throw the light in from the side, if the cataract is mature, all the lens is opaque so that the opacity in the lens comes right up to the back surface of the iris, there will be very little shadow cast by the margin of the iris upon the lens when you throw the light in from one side or the other.

If, on the other hand, there is a layer of transparent substance on the front side of the lens before you get down to where the opacity is, you have a crescentic shadow cast by the margin of the iris, and if you are in doubt, throw the light first from one side and then from the other, and you will find that the shadow comes always from the light, that is away from the light, no matter from which side you throw it.

Here is a better test for a person in ordinary practice. Tell the patient to wait until the sight has stopped getting worse. With an immature cataract there is a steady, although sometimes exceedingly tediously slow, increase of the opacity, but as long as there is any progression in the blindness, as long as the dimness of vision is increasing, you can be sure that the cataract has not reached its completion. When, however, the sight has stopped getting worse in the affected eye and the person has not noticed any change in the sight for a period of from three to six months, you can be quite sure that that cataract is not going to get any riper in any reasonable length of time.

The only disadvantage there is that once in a while something happens to the lens while they are waiting that spoils the chance of the operation when it comes. That is one reason why a patient who is in this waiting stage ought to consult a doctor from time to time to be sure that he has not developed any of the symptoms of a cataract glaucoma, as I call it.

When a cataract gets ripe, in many cases it undergoes a certain chemical change so that the contents of the capsule of the lens, are absorbed by the aqueous or are spewed out in the aqueous by a spontaneous rupture of the capsule, and set up a glaucoma. The eye will get as hard as a brick; sometimes it will get quite inflamed. In that case you will have warning that something is wrong, for the patient will come around and want to know what is the matter. But sometimes the eye just quietly gets hard as a result of the slow absorption either through the capsule or through small rents in the capsule. Occasionally an eye like that will be found to have a perfectly ripe cataract, but it is a blind eye, so the removal of the cataract does not do any good.

In waiting for the cataract to get ripe, the patient should report once a month to be sure that the light sense has not gone down, to be sure he has perfectly good projection to tell what direction the light comes from when you throw it in a dark room with the other eye closed, and also to see whether the appearance of the cataract has changed.

I speak of dilating the pupil quite frequently. Of course, in older people the dilatation of the pupil sometimes causes glaucoma, but you need not be afraid to do it if you will use for your dilatation homatropin 2 per cent or atropin 1/10 of 1 per cent. Then before you let the patient leave your office, give him two or three drops of eserin solution and let him take a little bottle of the solution to use at home until he is sure the pupil has returned to its normal size. In that way there is no danger of causing glaucoma.

I have never had any trouble with homatropin-dilatation glaucoma since I adopted that rule, except once when the rule was disobeyed by the people in the office when the patient went off without having the pupil brought down.

With regard to the necessity of waiting until a cataract is ripe; that is a moot point, though now it is not so much so as it used to be. It formerly was the rule never to operate on a cataract that was not mature, because it was found by experience, in the pre-antiseptic days when they did not know so much about it, that their results were apt to be poor where the cataract was immature compared with the cases where it was mature.

The practice has been gaining ground, probably due to the influence of the intracapsular operation. A number of men have ways of extracting or expelling the cataract in its capsule so that there is no capsule left behind. In that case, of course, there are no remnants of the lens left behind to disturb the after-result.

Most people now do not wait for the cataract to get ripe. It makes no difference to me whether the cataract is ripe or not. If the patient has two eyes, both fairly good, but both with cataracts, I tell him that he can have the cataract in the worse eye operated on as soon as the better eye gets so bad that he cannot have any fun in life.

Although on the average those cases of immature cataract give more trouble after the operation where you leave quite a little cortex, in the long run the final results compare very favorably with those where the cataract is entirely ripe, and it saves the patient anywhere from one to ten years of partial blindness.

Of course, you will say: Why not always take them out in the capsule? You no doubt have heard of the Indian-Smith operation. Smith was an Indian Army Surgeon who used to take out stone in the bladder and turn around and do two or three cataracts and then go back and cut off a leg. He had to do those things in the north of India, and he had thousands of these patients come down in the dry season. He would operate on more cataracts in a day than most men would in a year, and he found that so many of them had a secondary cataract from the remnants of the lens that they would go home in an unsatisfactory condition and never would come back; they would stay at home, telling everybody around that Smith was no good. Of course, it did not make a great deal of difference to him because he never got any money out of them anyway; still, he did not like to have his reputation injured, so he reached the conclusion that he would use the method of pushing the lens out in its capsule, which can be done very satisfactorily in a great many cases. It is a rather brutal operation and involves the use of quite a little force, and you are very apt to have loss of vitreous; nevertheless, one form or other of intracapsular operation is quite fashionable.

One of the great arguments in favor of it is that you can do it in these immature cases; you do not have to bother at all about whether the cataract is mature.

Another operation beside the Smith, which simply pushes the cataract out through a hole in the top part of the eye, consists of taking hold of the anterior part of the capsule with forceps and loosening the lens by wiggling back and forth, sometimes with expression from below. Those operations have quite a little to be said for them.

It is a curious thing how operations which are quite ingenious have arisen. All of those operations for pulling out the cataract with some kind of forceps arose through the respective surgeons' finding out by accident that when they took hold of the capsule with the forceps low down, intending merely to pull out a piece of the capsule, to their great surprise they pulled out the whole lens. That happened to me several times. When I took the smooth forceps and endeavored to pull out the capsule, I found that the whole lens came out. I promptly quit pulling them out because I did not like to have the whole partition broken down and the vitreous ready to come out if the patient happened to be a little unruly.

Many of the other men think I am an old fogey for hanging on to the capsulotomy operation, but I know if I had a cataract myself I would have a capsulotomy operation. If I were doing a thousand operations a month, such as they do in India, and never expect to have the people come back again, I would do the intracapsular operation, because those poor Indians have only one chance, and if they do not get a good result immediately they disappear and are never heard from again.

For the people of India and any other benighted people, the Smith operation is a good thing, but for civilized people of whom you can keep track I think the capsulotomy operation is a better one.

Just one more word as to the diagnosis of glaucoma. In your text-books on diseases of the eye you will find a long dissertation on the dangers of mistaking acute glaucoma for iritis and treating the patient with atropin or some other mydriatic, to their eternal damnation so far as sight is concerned. They give you two parallel columns showing you the symptoms of iritis on the one hand and the symptoms of acute glaucoma on the other. They say very little about the danger of mistaking chronic glaucoma for cataract. Chronic glaucoma is ten times as frequent as acute glaucoma, and chronic glaucoma, the so-called simple glaucoma, steals on the patient like a thief in the night! It comes along so gradually that they have no disturbance whatever and no pain, nothing to bother them except that the sight is gradually fading.

They go to the family doctor who takes a squint at them. The lens of anyone over sixty will give a reflex which suggests an opacity but which is really not an opacity; it is a change in the refractive index of the lens, but it looks like an opacity when you throw the light in from the side. The doctor says, "You haven't any pain; you have a beginning cataract. All you have to do is wait until it gets bad enough and have it removed." They wait until it gets bad enough, and then if they have glaucoma, they are blind.

To distinguish between the two is quite a little job. But remember that is a reasonably common mistake. Anyone in eye work will see one or more of these tragic cases. The quacks used to be very prominent in that work. When they could not get the patients to come to them, they would send the treatment by mail. They sent a mydriatic to many patients with supposedly beginning cataract, who really had glaucoma, and while the sight was at first improved when the pupil was dilated, it was eventually hopelessly lost.

DISCUSSION

Dr. Isaac: I want to ask the Doctor if there is anything promising in the treatment of otosclerosis.

Dr. Gifford: I have not done any ear work for about ten years.

Lieutenant Griswold: I should like to ask if the tension in chronic glaucoma corresponds at all with acute. Is it as much, or less?

Dr. Gifford: The tension in acute glaucoma is rather apt to be higher, on the average, but not necessarily so nor continuously so.

Lieutenant Griswold: But there is increased tension?

Dr. Gifford: Oh, yes. In chronic glaucoma there is increased tension, but the trouble is that you can't always feel it. That is the trouble for the practitioner. The eyes of a lot of old people feel hard when they have not got glaucoma, but the very ones that may have glaucoma may not feel hard to the physician who feels them with his finger. Since we now have a reliable measuring instrument to tell us with reasonable accuracy whether there is increased tension and what the tension is, we have been able to tell how many of these cases are really glaucoma. We used to have to depend upon what we could tell with our fingers and what the optic nerve told us. If we had an excavated disc with a diminishing field and the eye seemed hard, we would diagnose glaucoma, but if the eye did not seem hard we weren't sure what was the trouble.

Apparatus for Sale

One high-tension Diatherm in best of condition. Cost $525, will sell for $300. Address 535, care of this office.

South Dakota Practice for Sale

A $12,000 to $15,000 medical and surgical practice of a doctor recently deceased in a town of 700, large farming community and no competition. Opportunity of becoming county health officer. Hospital and office in connection. For details write Dr. Vennegut, Hague, N. D.

Practice Wanted in South Dakota

In a town of 1,500 or more. Preferably in eastern part of state. By a general practitioner. Address 545, care of this office.

Locum Tenens Wanted

Beginning on November 15 and will last until January or March. Opening may be permanent position. The location is in a small town. Address 539, care of this office.

Position as Secretary Wanted

By a woman of large experience, who was ten years in her last position and can give the best of references. Will work in a physician's office or in a clinic. Address 538, care of this office.

Practice for Sale—Splendid Opening

Deceased physician's office equipment and half interest in hospital in one of the best towns in Western Minnesota. Practice pays from $12,000 to $15,000. Can be had on easy terms. Address 543, care of this office.

Technician Wants Position

An *x*-ray technician, experienced in clinical laboratory, physical therapy, and metabolism; also a typist wants a position in a clinic or hospital. Thoroughly competent and can give best of references. Address 526, care of this office.

$40,000 Practice for Sale

Two physicians desiring to retire will sell their practice, including small hospital equipment, if desired, for cash. No real estate. Location, a thriving Northwestern college town of 6,000 population. Address 544, care of this office.

For Sale In South Dakota

A good paying general practice. Locum tenens did $451.00 while I was away last month. Invoice price of modern office equipment takes the location. Practice established since 1907 in County-seat town. Collections were 98 per cent last year. Address 541, care of this office.

Physician Wanted in North Dakota

Egeland, N. D., wants a doctor. Egeland is situated on the Soo Railroad and also on the branch of the Great Northern out of Devils Lake. Our closest towns having M.D.'s are Cando, sixteen miles south and Bisbee, fourteen miles west. There is nothing north to the Canadian line or east to Langdon, so the territory has unlimited possibilities. For any more information the interested party may write Seiverts Drug Store or Mr. M. J. Borgerson at Egeland, N. D.

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The Soo Railway Surgical Association
and The Sioux Valley Medical Association

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THE NURSING PROBLEM

There is a great deal to be said on the reliability, efficiency, and duties of the nurse, and sometimes it has been said in too emphatic terms and not altogether for the benefit of the nurse. The constant complaints that arise in the nursing problem have been insolvable many times, and the physician did not know what to do.

An article appearing in the *Modern Hospital* for November, written by Jeanette M. Geister, R.N., speaks, first of the complaints that are commonly made by patients who are being taken care of in hospitals and by nurses. She cites one instance where a boy's appendix cost his parents eight hundred dollars. We'll say it was a mighty good appendix! Mr. B's wife was confined, and it took all the money he had saved toward buying a car to pay her expenses. The majority of the people buy their cars first and are frequently in debt for the baby. That, of course, cannot be criticized too severely, and probably on the whole the baby will turn out much better than the car.

The third instance cited by Miss Geister is that of a man who had broken his leg, and he stated it would take a year before he could get caught up after paying his bills. Well, he ought to console himself with the fact that that leg will be perfectly sound when he does recover. However, this does not reach the point we are trying to make, that the expenses of a hospital room and the services of a graduate nurse and the physician's fees are sometimes more than the patient can afford—and some people want such a good room that they will pay a hundred dollars a week for their room alone. In addition they may have one or two nurses, at thirty-five or forty dollars a week each. But this patient complains just the same, particularly that the nurse slept half the night or was not around every moment during the day. Most of these people do not realize that a nurse is earning her living and that very often she is not sufficiently paid or the patient defaults in payment, and she is often without work for anywhere from one day to sixty days in the course of the year, which brings her earning capacity down to approximately twelve hundred dollars a year.

Another problem is the so-called practical nurse, who, when she has her first case outside of her own home gets a little experience but very little, and then branches out as a full-fledged nurse. She has no real education at all.

Of course the average patient would like to reduce, first of all, the nurse's charges, and, next, the doctor's fee. One can hardly blame them under the circumstances. The writer has often wondered how people in moderate circumstances can pay their weekly bills at a hospital. Of course, some families believe they can overcome this by keeping their sick people at home, and they discover, sometimes too late, that they are not prepared to take care of them. They have to employ nurses, sometimes securing them from a distance, and pay them as well as board them, and that, together with the increased work in the household, soon brings the expense up to more than the hospital charges per week. As a rule, too, a lot of new equipment is needed for the sick-room, and this tends to bring up the total expense.

The main question is what to do about this,—whether to employ a private nurse or put the patient in the hospital and let the hospital take care of the patient. The latter is preferable to the former. But again the question arises, what is to be done in a hospital. It is estimated by the Cleveland visiting nurses' association that the average post-partum care takes 58 minutes and costs $1.95; prenatal visits average 21 minutes and cost $1.04; the average bedside nursing consumes 28 minutes and costs $1.13.

At Saint Mary's Hospital in Rochester, Minn., they have an organization of its own graduate nursing service with a reserve staff in co-operation with the local registry for peaked loads of illness and for emergencies. On the other hand, the hospital free to select its own staff and free to select its work will be responsible for the nursing work. The third point is that the nursing service would be distributed to the patients in the quantity and quality the doctor feels is necessary for his patient,—one nurse to two, three, or four patients, or one nurse for one patient. Fourth, the nurse would be employed by the hospital and assured employment, regular hours for rest and recreation, and a reasonably shorter day than appears possible under present circumstances. One can see how this might be worked out in very successful form. But there are a number of objections to it in that the patients are not satisfied with seeing a new face every hour or two, or having a different type of nurse look after them; but, in the judgment of the writer, it is no worse than seeing the same nurse very often, and enduring some of her mannerisms or methods.

The question, too, in some hospitals, especially hospitals for certain purposes, like those devoted to the care of nervous and mental patients, the patients are distributed around in private rooms and looked after by a staff of nurses; no private nurses are employed under any circumstances except in exceptional cases where the patient is taken violently ill. It is the opinion of the writer, too, that many patients are better cared for in this manner than in any other. They go to the hospital for rest and attention. They have a routine, perhaps, to follow, but on the whole they are much more comfortable. They do not feel annoyed by too much attention and they get, what is most important of all, rest. This is rarely overdone.

Duluth has a hospital under a nursing service of its own nurses, and the work is perfectly satisfactory. Of course the principal thing is to feel sure that the nurses have sufficient common sense and ability to take care of one who is sick. The great trouble is that a great many nurses haven't brains enough to see what is needed, consequently they are awarded short employment and promptly dismissed from service.

This discussion is probably one that will occupy the attention of doctors and hospital staffs for the rest of their natural lives, as we are all more or less helplessly occupied in deciding what to do. Miss Geister wants it known that from her own experience as an executive and as a research worker she is convinced beyond any shadow of doubt that the money cost is not the primary factor in providing the best quality of nursing service to our patients. She may be right or she may open a large question for discussion. But the editor has often wondered how people could continue to pay for the nurse, the doctor, and the hospital. Somehow they do it, but very often they do not. On the whole it is surprising how they keep it up.

The editor thinks the success of the hospital, the nurse, and the doctor depends a good deal upon the business manager, who sees to it that the bills are collected, all bills, including the fees of the nurse and doctor. That is sometimes a very unique problem, but if it is gone after in a businesslike manner there is less loss than usually is anticipated. Are we right in this contention?

LO! THE POOR BANDIT

It seems that there is a good deal of unemployment in the country at large, and some of our otherwise worthy citizens (or unworthy ones) are trying to make up for the lack of employment by burglarizing the small banks throughout the country, where the people who really need their money for some definite purpose have their savings. But the poor bandit thinks otherwise, he wants it first, but he returns no interest on it.

The morning papers announced that a man in New York was convicted of stealing seven cents and was sent to prison for life under the Baumes law. We wonder why a man who steals anywhere from five to twenty thousand dollars from a bank by holding up the employees can escape so comfortably and so thoroughly when a man who steals seven cents is sent to prison for life. Evidently there is something wrong about the methods of capture and punishment of bandits. They may be more or less defective people in some respects, but are rather deft with their pistols and fingers, so they know a great deal more than we give them credit for. The writer has for some time been thinking of organizing a large company to look after the doctor's interests, to see if he could get just returns for his work from patients, not in any way to rob them of their possessions but simply to see that they pay for medical services. And the hope is that some day one of these bandits may be among those chosen to pay their bills!

Perhaps we have returned to some of the old English ways, the old practices in England. In the sixteenth century it was nothing unusual to have outlaws rush around the country and not only rob people of their purses but of their lives as well. Somehow the practice was discouraged for some time. Perhaps some of the bandits got hurt in the méleé. Do any of our readers recall the reference to this in the light operas by Gilbert and Sullivan? The writer remembers one verse, familiar to him when he was a young man.

"When the enterprising burglar's not aburgling, not a-burgling
And the cutthroat is not occupied in crime, 'pied in crime;
He loves to hear the little brook a-gurgling, brook a-gurgling
And listen to the distant village chime."

Evidently that was founded on some of the old English customs and manners as depicted by the younger, as well as the older, English writers. And if you want to get in touch with old England again on any such proposition, Jeffery Farnol has treated this in his latest book, "Guyford of Weare," in which he discourses on some of these old-times just as he did in his earlier books, "The Broad Highway," and other stories, including "The Amateur Gentleman," "The Loring Mystery," and "The Quest of Youth." They are real old English tales and they are not interspersed with automobiles and bicycles or anything of that sort. People rode horseback or drove in a chaise or walked, and even the bandits did the same in those days. But in our day, unfortunately, the bandits jump into a high-powered automobile and disappear around the corner, with the result that very few of them are apprehended. Of course all these conveniences save time, but sometimes it is very unfortunate. However, our present idea might be changed to that of shooting first and investigating afterwards when a burglar or bandit makes away with the loot, but, of course, that would be frowned upon by the clergy and other good folk because it is quite possible we might get the wrong man some time. What great harm would there be in sacrificing the life of an innocent person provided bandits were taken at the same time and the country rid of them. One of the papers came out recently with a plea for Hickman, but, fortunately, after he was hanged, stating it was quite difficult for a State to engage in the process of killing a person, and deploring it as a matter of principle. Of course no one was supposed to consider the death of Marian Parker, whom Hickman killed. Many other and prominent people die from accidental deaths, or sudden deaths, such as result from apoplexy or heart disease, and these are looked upon as an act of Providence, and the matter is smoothed over quickly by the onlooker as well as those who suffered the loss. It occurs to the writer that it would be no more of a calamity if an occasional innocent man were killed in the attempt to apprehend or kill the bandits that infest the country. And why one should be concerned over the fate of a common murderer who has been found guilty, in a fair way, is difficult to comprehend. Every possible legal obstacle was put in the way of his punishment, but fortunately they have a good governor in California and they had a wonderful jury,—so why worry?

DR. ARTHUR A. SWEENEY

Dr. Arthur A. Sweeney, of St. Paul, internationally known alienist and psychiatrist, died from heart disease on Wednesday, November seventh, after a very few days of illness. Doctor Sweeney was a very popular man and had innumerable friends. He was born in 1858, consequently was seventy years of age at the time of his death. He has many civic and medical problems to his credit. First of all, he was perhaps well known as one of the founders, with the late Charles Ames, of the Saint Paul Institute, an institution supported by Saint Paul donations and dedicated to the education of the people from an artistic and literary, as well as an historic, point of view. Many lectures have been given under the auspices of this institute.

The next most important thing, and perhaps the most prominent, Doctor Sweeney was noted for was his standing as an authority on medical jurisprudence and emigration. During the World War he was chosen head of the psychiatric department at Camp Dodge, Iowa, where he devised a test for determining the intelligence of emigrants, as well as one to be used on the men drafted for service, and this won him great fame because it was very skilfully and carefully used under his administration with the purpose in view of testing out the individual's mentality. He did not rely on the ordinary tests used, but devised tests of his own. For many years he was also consulting neurologist for the Northern Pacific, the Great Northern, and the Saint Paul and Milwaukee railroads.

Doctor Sweeney was consulted by congressmen in regard to the drafting of the present emigration laws, and he applied his knowledge of emigration in helping devise their statutes. He was frequently called away from Saint Paul on consultation work to determine the status of mental cases. Among other civic duties, he took part in the formation of the "Informal Club" of Saint Paul, which has been widely known over the state and particularly to his neurological friends in Minneapolis. Doctor Sweeney was also recognized as one of the most prominent men on the expert witness stand, partly on account of his presence, which was of an impressive character, and also for his voice. No one who has ever heard Doctor Sweeney testify will forget his sonorous voice and his simplicity in presenting his subjects clearly, distinctly, and understandingly. Consequently he was of great value to the medical-legal departments of the Northwest. Further than this, he knew his medical jurisprudence. He taught medical jurisprudence in the University Medical School for thirty-four years.

All who knew Doctor Sweeney will miss him because of his genial attitude and his pleasing manner, and his welcome friendship. The editor of The Journal-Lancet feels particularly the loss of a valued and much beloved friend.

DR. WILLARD D. PINEO

Dr Willard D. Pineo, of Minneapolis, who died November third, 1928, was seventy years of age at the time of his death. He was graduated from the Minnesota Medical School and in the first class that graduated from the school. He had practiced eye and ear work for many years in Minneapolis and was a very careful man. One never heard a derogatory word from Doctor Pineo about his fellow practitioners, which, to the mind of the writer, is saying a great deal. If we would all follow Doctor Pineo's example there would be a certain fraternal feeling that would be widely disseminated. Doctor Pineo was modest in his attainments but practical and thorough in his work. He studied medicine with Dr. F. A. Dunsmoor when he first came to Minneapolis, in 1883, and after graduation from the University Medical School, or what was its nucleus, he studied for a time in London and Paris. He was Past Master of the Hennepin Lodge No. 4, and a Wise Master of Rose Croix.

Doctor Pineo married Miss Sadie Cobb in 1894 and she survives him.

Funeral services were conducted at the Scottish Rites Cathedral on Monday, November fifth, at 3:30 P. M.

DR. CHARLES E. McCAULEY

Dr. Charles E. McCauley, of Aberdeen, S. D., was evidently a man of distinction in that state. There were at least six large organizations that attended his funeral last week and they were more or less indebted to him in some way. The Red Cross lauds Doctor McCauley's work, and at Saint Luke's Hospital the sisters, the staff, and the alumni and training school all paid tribute to Doctor McCauley's work and showed the respect they entertained for him. He was particularly noted as a notable figure in several prominent medical societies. The one he most enjoyed was evidently the Sioux Valley Medical Association, of which he was president two or three years ago. He was always an attendant at the meetings of the General Assembly of America, formerly known as the Tri-State Association, and those who knew him, both as a man and as a physician, and knew his attainments will miss him greatly.

It seems to us that we are losing many of our medical men just now that ought not to be taken from us; but we cannot always anticipate, and when a man dies after a few days' illness, from some sudden condition, we wonder about the machinery of the human body and why such things occur. Not that they are preventable, but we would like to be informed as to the mechanism through which a slight illness produces a sudden death in two or three days.

An occasional contributor to our columns under the pen name of the "Old Country Doctor" sends us the following tribute to a beloved city doctor:

> Doctor McCauley was a medical man of skill and learning. He was a member of the A. C. S. He was the ideal general practitioner. He did not find the practice of medicine a life of drugery as so many of us do. Instead he found it a fair field of enchantment and romance. Being a natural student, he brought to the practice of medicine all that romantic ardor that gives a spiritual thrill to the life of the doctor.
>
> He had much charm of personality, and although a popular physician, courted and flattered, he never felt himself any better than the man who ran the elevator that took him up to his office.
>
> The funeral was held in the First Presbyterian Church of Aberdeen. This large building was filled to capacity by people from every walk of life. Rich and poor, Catholic and Protestant, priest and layman met together to express their sorrow.
>
> The religious services were beautiful and impressive, and the Divine Light shone with a pale splendor as the singers sang and the people bowed their heads in tribute to a life that was ended. May he rest in peace.

DR. THEODORE TENNYSON

In the passing of Dr. Theodore Tennyson, the Swedish Hospital has lost a faithful Staff member and the medical profession an able physician.

The Swedish Hospital Staff, at its November meeting, desires to record its appreciation of Dr. Tennyson and to testify to his personal and professional worth. The fact that he has practiced medicine successfully in Minneapolis for twenty-five years, has built up a large practice and a devoted and grateful following among his patients, and has always been in accord and good fellowship with his colleagues, is ample proof of a useful and successful life.

Be it resolved that this expression of sympathy to his family be spread upon the minutes of our meeting and a copy sent to the members of his family.

Soren P. Rees, M.D.
Chief of Staff.

NEWS ITEMS

Miss Margaret Krum, a registered nurse, has opened a hospital at Hankinson, N. D.

The rural school teachers of Steele County, Minn., are working to get a county nurse for that county.

The Mandan (N. D.) Deaconess Hospital building is to be thoroughly renovated and is to have a very complete *x*-ray equipment.

Dr. Williard D. Pineo, of Minneapolis, died on November 3, at the age of 70. Further notice of Dr. Pineo appears on another page.

Dr. G. W. Dahlquist, after spending a year in general practice at Lancaster, Minn., has resumed his position on the staff of the U. S. Veterans' Bureau at Fargo, N. D.

The Minnesota Society of Internal Medicine met in Rochester on November 5. The attendance was good, and thirteen papers were presented.

A very useful chart is distributed by the Department of Health of North Dakota to the schools. It lists the symptoms of communicable and other diseases.

The sale of Christmas Seals in many parts of the Northwest is under way and is receiving the hearty endorsement and support of physicians, as it well deserves to receive.

At a meeting last month of the Park Region (Minn.) District Medical Society, held at Alexandria, Dr. A. D. Haskell, of that city, was elected president of the Society.

The church choirs of Rapid City, S. D., have planned to give patients in the Methodist Deaconess Hospital of that city a series of Sunday afternoon musicals this winter.

The supreme court of Minnesota holds that a contract made by a physician not to practice medicine and surgery within twenty-five miles of a certain city within five years is valid.

At the meeting of the Red River Valley Medical Society at Thief River Falls, Minn., last month papers were presented by Drs. J. A. Myers and J. M. Hayes, of Minneapolis.

The wives of physicians in New Underwood, S. D., and vicinity have organized a woman's auxilliary to assist in raising funds for a new community hospital to be built at that place.

Dr. Olga Steineke, of Chicago, has joined the staff of the New Madison Hospital of Madison, S. D. She will have charge of the X-ray, Physiotherapy, and Laboratory Department and give the anesthetics.

An effort is being made in Sioux Falls, S. D., to raise $200,000 to erect a new building for the Sioux Valley Hospital of that city. The physicians of Sioux Falls are liberal contributors to the fund.

Dr. Edward F. Kennedy, of St. Paul, died last month at the age of 44. Dr. Kennedy was a graduate of the Medical School of the University of Minnesota, class of '08, and formerly practiced in Delano.

The Central Minnesota District Medical Society held its annual meeting at Cambridge last month, when the following officers were elected; President, Dr. H. C. Cooney, Princeton; secretary-treasurer, Dr. Charles Swenson, of Braham.

The new addition to the North Dakota Tuberculosis Sanatorium at Dunseith, N. D., is nearing completion, and patients will be admitted about January 1. Special facilities for testing the use of the violet rays have been provided.

The Health Department of the State of North Dakota at Bismarck, N. D., has just moved into larger quarters, which will greatly facilitate the work of the Department, long handicapped in many ways. It is now making splendid progress.

Dr. J. J. Barfield, of the Cragmor Sanitarium, Colorado Springs, Colo., assisted in holding clinics in ten towns of Minnehaha County (Sioux Falls), South Dakota, last month, the cost of the work being paid out of the sale of Christmas Seals.

A Mandan (N. D.) newspaper gives the public through its columns information as to the precaution taken by the two Mandan hospitals against the loss of identity of babies born there, and adds that the system of taking foot-prints will soon be adopted in both hospitals.

Sir Charles Ballance, consulting surgeon, St. Thomas Hospital, London, gave a Mayo Foundation lecture at the Mayo Clinic last month. His title was "The story of cancer research." While he is well known as a neurosurgeon he has written books on the surgery of the heart and has done considerable research on cancer.

Dr. F. W. Maroney, of Atlantic City, N. J., was in Minneapolis last week and spoke several times at the meeting of the Minnesota Public Health Association. Dr. Maroney is a distinguished public health worker and writer, being the author of text-books on public health and a speaker in demand for public health meetings.

The Park Region District Medical Society of Minnesota held its annual meeting at Alexandria last month. Papers were presented by Dr. E. J. Huenekens, of Minneapolis, and Dr. F. J. Brabec, of Perham; and the following officers were elected: President, Dr. A. D. Haskell, of Alexandria; secretary-treasurer, Dr. T. Satersmoen, of Pelican Rapids.

The twenty-fifth anniversary of the founding of St. John's Hospital at Red Wing, Minn., was celebrated with beautiful exercises last month. The Hospital was opened with four patients and was served by three nurses. Its capacity is now 85 beds, and it draws patients from several states. It is a worthwhile institution.

The Minnesota Public Health and the Minnesota State Medical Associations are doing a very effective public health work, especially along the line of preventive tuberculosis work. At present tuberculosis short (two day) courses are being held to reach general practitioners in small places. At the first meeting held at Worthington, fifty physicians registered and were from fifteen counties.

Dr. Theodore Tennyson, of Minneapolis, died last month at the age of 59. Dr. Tennyson was a graduate of the Missouri Medical College, of St. Louis, class of '98. He came to Minneapolis in 1903 and at once became prominent in medical circles. He was on the surgical staffs of the Swedish, the Fairview, and the Norwegian Deaconess Hospitals.

Dr. Arthur A. Sweeney, of St. Paul, died last week at the age of 70. Dr. Sweeney was a graduate of Harvard University Medical School, class of '86, and began practice in St. Paul in 1886. He did extensive postgraduate work in America and Europe, and soon established a wide reputation in medical circles. He has been a frequent contributor to our columns. Further notice of Dr. Sweney appears on another page.

Dr. J. A. Myers, of Minneapolis, presented two addresses at the recent annual meeting of the Tuberculosis and Public Health Association of Illinois, held at Centralia, Ill., on the following subjects: "Diagnosis of Childhood Tuberculosis" and "Tuberculosis in Teen-Age." He also presented a paper last week at the annual meeting of the Medical and Surgical Association of the Southwest, at Albuquerque, New Mexico.

Dr. Charles E. McCauley, of Aberdeen, S. D., died on November 5, 1928, at the age of 53. Dr. McCauley was a pioneer physician in Aberdeen a quarter of a century ago and was a leader in medical matters in South Dakota, having been president of the State and the Sioux Valley Medical Associations and prominent in many medical activities of the Northwest. He was a graduate from the Rush Medical College, class of '01, and an earnest student since his graduation. Memorials of Dr. McCauley will appear in a later issue of this journal.

Drs. Archie W. McCannel and L. H. Kermott, of Minot, N. D., and Dr. J. G. Lamont, of San Haven, N. D., were visitors in Minneapolis last week. They report a satisfactory growth of the new Minot clinic, a splendid enterprise for any state and a prosperous condition of the State Tuberculosis Sanitarium at San Haven. An effort will be made this winter to reach most of the contact cases of tuberculosis in this quarter of the state, giving each case of this kind treatment and care in the State Tubeculosis Sanitarium for two or more weeks.

(For Want and Miscellaneous Items see page 528)

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TOXEMIAS OF PREGNANCY*

By Fred L. Adair, M.D.
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MINNEAPOLIS, MINNESOTA

It is rather difficult to classify the toxemias of pregnancy on any really rational basis because we know so little of their causation. They are commonly classified according to the symptoms, and not according to any knowledge as to their causation. There are a few principal types of toxemia. One type occurs in early pregnancy and is not infrequently spoken of as early toxemia. The important feature is the vomiting. Another type of toxemia is one which occurs late and is associated usually with albuminuria, edema, high blood pressure, and certain other associated conditions. That is not infrequently spoken of as late toxemia.

We shall first take up a consideration of the early toxemia, or the type associated with vomiting. This has been called a variety of names from hyperemesis gravidarum to pernicious vomiting of pregnancy. This condition is ordinarily grouped into three different types in an attempt to clarify the etiology.

First, the reflex type. This is supposed to originate from some condition in the genital canal which through reflex action results in vomiting. We not infrequently find in cases of vomiting certain malpositions and other affections of the genital tract. Occasionally after the correction of these conditions the vomiting ceases.

Second, the neurotic type. In these neurotic individuals sometimes nothing that we do will stop the vomiting. Practically speaking, it is probably better to ignore the reflex type and divide into two groups, the *neurotic* and what is called the *toxic type*.

It is well known, of course, that there are neurotic people and women who are affected with neuroses, as well as men. These neurotic women become pregnant and are not always reconciled to the pregnancy. It is also true that we have vomiting as a symptom of pregnancy. It is difficult, of course, to estimate the reaction of the neurotic individual to different conditions which present themselves to her for adjustment, and we not infrequently find that this symptom of nausea and vomiting becomes very much aggravated. We very often have this condition to excess. The continued vomiting is, of course, an extremely serious condition, even if it occurs in an individual who has been quite normal. Persistent vomiting becomes exhausting in a person who vomits day after day; then, in addition to this exhaustion from the mechanism of vomiting, we have associated with it a great deal of loss of sleep. We have inability to retain food and inability to retain fluid. This also makes a very serious combination. Even with a neurotic individual without toxemia, we soon have developed this combination of conditions, namely: (1) exhaustion; (2) dehydration, and (3) starvation supervene from lack of fluid and food. If this process goes on to a sufficient degree we have malnutrition with disturbances of metabolism and definite toxic conditions resulting from this exhaustion, dehydration, and starvation.

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This makes up, I think, a very definite clue to the management of this type of case. Control or prevent this exhaustion by the administration of sedatives. Check the vomiting so far as possible and secure rest. Fluid must be supplied to prevent this dehydration, and so far as possible nourishment must be given in order to prevent starvation. These neurotic cases are quite amenable to suggestion. One may simply avoid the suggestion of anything that has to do with vomiting. Ignore the condition altogether, do not have any emesis basin around; do not act as if the patient were going to vomit; do not refer to the condition or ask her about it. Go ahead and give fluid and food. It may work with some cases and with some it does not. With other cases one may appeal to the element of fear; suggest that if the vomiting does not stop, it may be necessary to do something that the patient does not like to have done. One may use indirect suggestion. One may be able to inspire the confidence of the patient and assure her that certain methods of treatment will give good results. In some cases it may be necessary to anesthetize the patient and apparently carry out some operative procedure or even do a slight dilatation of the cervix, which has been recommended for this type of vomiting. Anything of that kind should be reserved for very extreme cases because of the possibility of terminating the pregnancy.

It is very difficult to tell in advance just how to manage these cases. Each one presents an individual problem and has to be handled accordingly. Generally, however, sedatives can be given. The sedative which I use in both the neurotic type and the toxic type is bromide. This can be administered in rather large doses. The objection to the use of some forms of sedatives, is, of course, that they may be too depressing, and one objection to the use of many sedatives is that they may be habit-forming. Particularly in the neurotic type, one should avoid the use of any drug which might have this result. I do not think bromide is particularly habit-forming. It has certain disadvantages. It not infrequently causes skin lesions and has toxic effects. Bromides act as well as any sedative that can be used. The dosage varies with the different individuals. It may be possible to control milder cases with a dose of 15 to 20 grains. If that does not do, increase up to 30 grains twice daily. In these cases I gradually run the dosage up as high as 50 or 60 grains three times daily. This should not be continued for any length of time. Along with the administration of bromides one can also use retention enemas of glucose or sodium bicarbonate. In other cases fluids can be forced by hypodermoclysis. This is not a particularly comfortable procedure. This in itself will not only increase the supply of fluid but may act beneficially on the patient through suggestion.

We always have still another method of supplying fluid, which has a more or less direct effect on the patient, not only the neurotic type but also the toxic type, namely, by intravenous injection. Here we may use glucose. It can be used in different percentages and amounts and with different technics. At one time the use of insulin in connection with the use of intravenous glucose seemed to be quite the proper procedure, and it still is used. I do not know what the ultimate status of this therapy will be. Glucose works very nicely and can be used in five or ten per cent and given in amounts from 100 to 500 c.c. It seems to work very nicely in some of these cases.

The feeding of these vomiting cases presents a very great problem and a very important one. In the first place, the feeding should be rather frequent in time intervals and in rather small quantities. The routine management of this type of case coming under observation would be, first, withhold everything by mouth until the vomiting ceases, say twenty-four hours. Usually the vomiting will stop when the stomach is empty. In the meantime sedatives can be used. After the patient has had a period of rest and the stomach a period of inactivity, we can begin to put something into it. Probably the first thing that is suggested to one's mind is some liquid. As a matter of fact, these cases of vomiting of pregnancy seem to be much less apt to retain liquid than semisolids. Often better results can be accomplished by starting in with some thick food, some sort of semisolid food, one which is heavy as compared with usual liquids. Begin with a thick cereal or thick, heavy purée soup. Start with possibly not more than a half an ounce every hour or every half hour. Give small quantities at rather frequent intervals. Gradually increase the amount and gradually decrease in frequency as the amount increases. Appeal to the taste of the individual; find out what she likes and what she craves. It is of great importance in these cases to start with the treatment early before they have become too sick and have reached a really serious condition.

We can combat dehydration by the administration of fluid by rectum or subcutaneously. If a patient is vomiting persistently and continuously it is impossible to have any great amount of absorption of fluid from the stomach. This means that we have to supply fluid by rectum, subcutaneously or intravenously. Prevention of exhaustion is largely accomplished by the administration of sedatives of which bromide is the best and the most beneficial to use. The feeding of these patients is the big problem. It may not be the one which is the most urgently presented because the exhaustion and dehydration may have become so marked as to constitute the most important condition. Rectal feeding provides very little nutriment. Enemas of glucose help some. Glucose intravenously supplies a certain nutritive need, but that of course, cannot be carried on for any length of time. We can, where necessary, supply the nutritive needs by means of transfusion. One has to bear in mind the possible danger of a reaction. In case of need the patient can be built up quite rapidly by this means.

The toxic type is more serious and less common. So far as combating the toxemia is concerned, we have no specific antitoxin which will combat this toxin. There is a group which becomes secondarily toxic. Fortunately, primary toxic cases are rare. They are extremely serious, and I think that the prevailing opinion is that if a case is definitely proved to be toxic probably the best method of treatment is the termination of the pregnancy; and somtimes, if a case has gone too far, even this is of no avail. So one's effort should be directed primarily to differentiate between non-toxic and toxic cases, the latter being much more serious. This differentiation is not so easy as might appear.

There are certain earmarks of a toxic case which we must consider. One is the rather rapid progress of the case. Most of these cases of both types usually have a low blood pressure, lower, in fact, than normal. This probably depends somewhat on the debilitated condition of the patient. A toxic case not infrequently becomes jaundiced. We find bile pigments in the urine, yellow sclera, and jaundice of the skin, which are all rather ominous signs. There may be hematemesis with fresh blood in the gastric contents or dark chocolate or coffee-colored vomitus. More frequently they have albuminuria and not infrequently hematuria. The ammonia coefficient is rather high in toxic cases, and it was at one time thought that this was a very accurate means of differentiating the toxic from the non-toxic cases. Inasmuch as a vomiting case is really one of starvation, where this is also present, it is not a good means to differentiate. There is a tendency in toxic cases to bad oral conditions. We not infrequently find bleeding gums. This occasionally occurs in a non-toxic case, but rather more commonly in toxic cases. In extreme cases there are hemorrhages in other parts of the body. These, of course, are serious cases and while enabling us to make a diagnosis ultimately, it may be too late to be of benefit to the patient. One other feature of importance is that sometimes a cessation of vomiting is unfavorable. This is particularly true in toxic cases. A woman after vomiting for days or weeks may stop; this may lead us to think that the condition has improved, but I have seen cases where this seemed to be rather an unfavorable condition. One has to be rather on his guard for sudden cessation of this symptom. Direct your attention to the general condition of the patient rather than to one manifestation. Upon any indication that the patient has reached a very serious stage, it is unsafe to allow matters to proceed any further. Watch especially the sensorium.

While not going into the method of the termination of pregnancy, attention is called to the fact that such a procedure is necessary in some of these cases. The indications for operative procedure and the termination of pregnancy are rather hard to define clearly. One really cannot pick out any one feature. One guide is the pulse. A patient who has been vomiting becomes more and more exhausted, dehydrated, and acquires a rapid pulse. We have considerable apprehension where the pulse becomes progressively more and more rapid. Just when the pulse reaches the danger point is rather difficult to determine. It is rather undesirable to pick out one thing and say, when this is so and so you should do such and such a thing. A falling blood pressure would be of some significance. Any decrease in the blood pressure with an increase in the pulse rate would be unfavorable. Of course the onset of such symptoms as hematemesis, hematuria, bleeding gums, petechial hemorrhages, jaundice, and bile pigments in the urine are all unfavorable and probably it is better if the patient is not allowed to go to such a point before the pregnancy is terminated. Loss of weight is of importance, but most of these patients are bedridden, and it is very difficult to watch the weight carefully. One has to go largely by the general condition of the patient. The urinary output is somewhat important, and when reduced to small amounts would not give a very favorable prognosis.

The group known as late toxemia is quite different from the above type. This usually occurs late in pregnancy, in the vast majority of cases after the sixth month. Approximately 85 per cent of the so-called eclamptic toxemias of pregnancy occur after the sixth month. In general this group of conditions which pass under various names, pre-clampsia and eclampsia and toxemia, are associated with high blood pressure, albuminuria, and edema. This might be considered the triad of symptoms which go with this type of toxemia. The classification of toxemia is largely symptomatic. Where making a classification of symptoms of any disease it is natural that varying conditions should be grouped under one head. There is no one particular condition which presents the symptoms of hypertension, albuminuria, and edema, but rather a group of conditions. Just how to separate these different things is rather difficult to determine. The same condition may exist prior to the onset of pregnancy. The woman may have had a *nephritis* of some type which existed before the onset of pregnancy. She may have had a nephritis earlier in life which did not present any particular findings prior to the onset of pregnancy; but with the lowered kidney reserve this nephritis may appear under the stress of pregnancy. This represents one group of cases which has been classified under toxemia and probably could be called the nephritic type. A woman has a nephritis either actually or potentially which becomes aggravated. We know, of course, a nephritis sometimes reaches the point where we have a uremic condition which is associated with convulsions. This may be succeeded by a comatose condition. Convulsions and subsequent coma have in the past been considered as rather characteristic features of eclampsia. In fact, that is what the word means. We have then this nephritic group which may not present so much hypertension, may present albuminuria, edema, headaches, and various other features which go along with it, even to the point of convulsions.

We have another condition, *hypertension*. There is such a condition as essential hypertension. We do not know what causes this, but we do know some of the manifestations, and also know that a woman who is pregnant and who has either an essential or actual hypertension, is made worse by pregnancy. A woman who had no high blood pressure either prior to or in the early months of pregnancy begins to develop a gradual increase in her blood pressure. Just how high it may go depends on circumstances. It may not rise to over 140; others may go to over 200. In some way pregnancy aggravates this condition. Whether the toxemia of pregnancy or some other condition causes this hypertension it is difficult to tell. These women who tend to have hypertension run a higher blood pressure during pregnancy than they do at other times. It may reach a very high stage during the latter months of pregnancy. This may occur without any other symptoms, or there may be faint trace of albumin.

There is another group of cases which may be designated as *pre-eclamptic* toxemia. A woman goes through the pregnancy without any other disturbance up to say the sixth month, even almost to term, and then suddenly the blood pressure rises, the urine output diminishes, she develops large amount of albumin, edema, headaches, epigastric distress, and certain other symptoms of lesser significance and importance which go along with it.

A rather rapid rise in blood pressure with albuminuria, edema, and certain subjective symptoms fairly clearly characterizes these three different conditions, which have been grouped under the so-called toxemias of pregnancy: First, a woman with an actual *nephritis* or a woman who has had nephritis and has in a sense become cured but breaks under the stress of pregnancy; second, a woman with an actual or essential *hypertension;* third, a woman who has a *pre-eclampsia* or a *true eclampsia,* with rapid onset of hypertension, albuminuria, edema, convulsions, coma, and possibly even death.

The subsequent course of these conditions is also of considerable interest. A woman who has had nephritis which becomes aggravated and develops during pregnancy may go through the pregnancy, may have intra-uterine death of the fetus, may go on to convulsions, then after the expulsion of the fetus from the uterus may show definite improvement, but as a rule it takes a considerable time for these symptoms to clear up. It is a long process. It may persist for months or years, and she may never fully recover from it. That is the type of condition which is characteristic—long, slow convalescence with perhaps incomplete recovery. Under other situations the woman is made definitely worse by the pregnancy, and the condition does not clear up.

In the hypertension case we see a similar sort of process. At first there is nearly a normal blood pressure, which goes up as the pregnancy develops. While there is a drop following delivery, the pressure does not go back to the previous level. It continues at a higher point. This goes on for weeks and months or years.

On the other hand, the eclamptic type of toxemia usually clears up within a very short time, within a few weeks or months. The pregnancy terminates and in a few weeks or months the blood pressure is normal, the albuminuria disappears, and the woman is in an apparently normal condition.

In case of subsequent pregnancy we see a difference in the behavior of these types. A woman with an impaired kidney is not only made worse by one pregnancy, but is made worse by subsequent pregnancies. The same thing is true of the hypertension case. On the other hand, in these eclamptic toxemias there is no great tendency to recur. There is nothing like the tendency to have the condition recur seen in the other groups of cases.

The effect on the fetus is also of considerable importance. The nephritic type of toxemia very definitely predisposes the fetus to intra-uterine death. Probably syphilis is the only other disease which causes more intra-uterine fetal deaths than does the nephritic type of the so-called toxemia of pregnancy. The hypertension group of cases also may cause fetal death, but probably not so frequently as the nephritic. Eclamptic toxemia does not predispose to fetal death so frequently, though it is often the indirect cause.

We know very little about any of them. So far as the nephritic type is concerned, we probably have already learned that it may come from toxins. Certain types seem to be caused not only by a single infection but by repeated infections. Scarlet fever is apt to produce the glomerular type of nephritis. What produces the arteriolar type is not perhaps so clear.

We know little or nothing positively about the actual cause of essential hypertension though arteriolar spasm seems to be associated with it. We know the effect, but the factors in the life of the patient causing it are difficult to determine. It may be familial, but so far we know little of the causes and are pretty much in the dark. Whatever the cause the pregnancy certainly aggravates the condition.

Eclampsia.—We are also very much in doubt about the etiology of eclampsia, but we do know that it is definitely associated with pregnancy, that it is apparently caused from some intra-uterine toxin. Primiparous women seem to be predisposed to it, women with multiple pregnancies seem to have it in a greater proportion than in single pregnancies. It has been discovered in extra-uterine pregnancies and has been found in hydatidiform mole. We know also that women who are not pregnant do not have it. Whether the cause is fetal or placental in origin we do not know.

In the *hypertension* group the primary tissue changes are cardiovascular with secondary changes in other organs. Ultimately the organs are affected as a result of the involvement of these small arterioles. Also, there are changes in the heart, due in a measure probably to the increased vascular pressure, so-called hypertension heart. In contradistinction to these, in *true eclampsia* the predominant changes are in the liver. The characteristic pathology in the liver is indicated by hemorrhagic areas.

We probably have other conditions which may be grouped under a general heading of toxemia of pregnancy, but, I think, we can clearly recognize these three different groups, namely: (1) the group where the kidney particularly is involved; (2) another group where we have definite involvement of the cardiovascular system; (3) rather acute conditions where the most characteristic involvement is in the liver with changes in the kidney such as more or less nephrosis, and not generally a true nephritis or degeneration of the kidney with other less constant changes in brain, lungs, and so forth.

The management of these cases is extremely important. We know practically nothing about the prophylaxis of these diseases or their etiology and naturally we know relatively little about the prevention, but we know considerable about their early diagnosis, and that is really the important thing in the management of the woman who is pregnant. The means of diagnosing these conditions is the main thing. The principal thing is to have the woman under observation during pregnancy. That may be her fault if she does not come under observation; or if she does come and the physician fails to make the observations then it is his fault. Many women do not consult a physician during the early months of pregnancy, and, I am sorry to say, another group of women do consult physicians who do not see the necessity of giving them proper attention. The main way that we find these toxemias is by routine examination of the urine and by taking the blood pressure. Of course, we also get certain clues to the condition by taking the history of the patient, by routine physical examination with weight, etc. There are certain findings in the past history of the patient which are indicative of these diseases; a history of nephritis or of hypertension may be brought out. Physical examination, then, with particular emphasis on taking blood pressure and urinalysis brings out some of the points which are necessary in the early diagnosis.

It is quite common, of course, to put the patient on a restricted diet, and that may be of some help. We do not know just how much effect the diet has. It is customary to give a low-protein diet, and that probably does not have much effect on many of these cases. However, many people eat an excess of protein foods, and it is quite desirable to restore this to the normal requirement. Many people tend to eat an excess of fats. Some take an excess of salt. Many others are prone to take insufficient food. In the management of a case so far as the diet is concerned, we should see that they have at least the minimum protein requirement, plenty of fresh food in the form of vegetables, a limited amount of carbohydrates and fat in their diet, especially if inclined to put on weight. We should also, in correcting their diet, see that the body weight is maintained at the normal level; certain women are undernourished and others are excessively nourished, which is also harmful. In correcting any of these tendencies, particularly the tendency to overweight, one has to be cautious about any excessive restriction of the diet and any rapid reduction in weight. That in itself might be quite harmful in some cases. We should also give careful attention to the bowels and kidneys, to the lungs and skin; in other words, see that the personal hygiene is kept up with exercise and fresh air. Rest is of importance, particularly to a case of nephritis. Excessive activity, either mental or physical, is detrimental. It is important that there should be ample rest at night and also periods of relaxation during the day. There should not be any exhaustion either physical or mental. When these conditions develop and reach a certain point it sometimes becomes necessary to take steps to terminate the pregnancy.

If intra-uterine death of the fetus occurs and can be demonstrated, it is of no use to carry the pregnancy further. Many times the condition improves with the death of the fetus, and while the carrying of the dead fetus may not be particularly serious we have now, I think, a means of terminating the pregnancy with a dead fetus which is quite effective in the majority of cases. We can use artificial means of terminating the pregnancy by the use of castor oil, quinine, and pituitrin. It is of considerable help in terminating the pregnancy with a dead fetus. Ordinarily castor oil and quinine and pituitrin do not work in cases except at term. It is very difficult to induce labor in a normal case of pregnancy prior to term, but the dead fetus seems to act more as a foreign body, and consequently it is often possible to induce labor with castor oil, quinine, and pituitrin. A point to keep in mind in these toxic cases with reference to high blood pressure is that pituitrin may increase the blood pressure. If there is a high blood pressure, and this is elevated following the administration of a test dose of pituitrin, it probably would not be wise to continue the dosage of pituitrin. If pituitrin has no such effect, in all probability it is safe to administer it.

There are three main conditions to consider: (1) the condition where there is an actual nephritis or where the kidney is damaged so that a nephritis develops as a result of the pregnancy; (2) cases where the hypertension factor seems to be the dominant affection; (3) a group which makes up the pre-eclamptic and eclamptic group. True eclampsia is a disease which usually develops rather abruptly,—headache, visual disturbance, and epigastric distress. The principal symptoms and findings are edema, high blood pressure, and albuminuria. In this type of condition acute symptoms, such as convulsions and coma, are more likely to occur. We do not very often have convulsions in the hypertension group. This type which looks like hyperpiesia rarely goes on to convulsions unless there is some other condition associated with it. Convulsions occur in the nephritic type, but are usually of a uremic nature. One has not only to differentiate these conditions, one from the other, but also from affections which have nothing to do with the pregnancy.

One of the most important things in a differential diagnosis is the diagnosis of other conditions which produce *convulsions.* If called to a woman with convulsions, one of the first things to be considered would be the possibility of pregnancy. If pregnant, think of toxemia of nephritic or eclamptic type. There are, of course, other conditions to be distinguished. Hysteric convulsions occur sometimes during pregnancy. Usually the blood pressure is undisturbed, and there are no edema and no albuminuria. Epilepsy is another thing which has to be considered, and a diagnosis here may be somewhat more difficult. As a general thing patients with epilepsy do not have high blood pressure or albuminuria. We have also to consider types of poisoning, of which perhaps the most difficult one to differentiate is strychnine poisoning. Here a history might be of some help. So far as *coma* is concerned, we have to think of morphine poisoning, diabetes, and of traumatic conditions which might produce it. There are certain infectious diseases which might give rise to a convulsive attack with coma. Meningitis and tetanus rarely occur, though sometimes they develop during pregnancy and the puerperium. A woman, of course, might have an intracranial lesion, but usually this occurs in older women, and usually young pregnant women are not so susceptible to it.

The management of these cases depends a great deal on the manifestations. The symptoms and findings rather than any etiologic factors serve largely as a basis of classification. Treatment and indications for management are also largely symptomatic. It depends to a considerable extent on the period of pregnancy at which the manifestations occur. With albuminuria, edema, and high blood pressure at the third month, the case would be handled somewhat differently than at the sixth or seventh month of pregnancy or close to term. Ordinarily these findings do not occur early in pregnancy. The nephritis type and the hypertension type may, but the eclamptic type rarely occurs early in pregnancy. I have seen one case of the eclamptic type with convulsions at the third month. The vast majority occur in the last trimester and most of them during the last two calendar months or the last three lunar months.

It is difficult to pick out any one finding and symptom and say when such and such a thing occurs you should do so and so. If, for instance, a woman came in at the fifth month of pregnancy and had a high blood pressure, say 180, with no albuminuria, while you would be apprehensive about the case, you would probably manage her somewhat differently than you would handle a woman with hypertension, albuminuria, and subjective symptoms, such as headache and epigastric distress. These conditions have to be looked at primarily from the standpoint of preservation of life, at least of the mother, and also of the effect upon her health. There might be serious damage to her organs. We have also to consider the fetus.

The nephritic type.—The management of a woman with a definite nephritis and high blood pressure. We do not often see a woman of this type having manifestations early in pregnancy. About the fifth or sixth month she may appear with a high blood pressure, say around 160 or 170, lots of albumin in the urine, perhaps a diminished output, and the fetus alive. How long would it be safe to carry a woman of that type? It is not safe for a woman with those manifestations at the fifth month to be carried along to the seventh month. The chances of the survival of the fetus are not very great. A large percentage of these nephritic cases result in fetal death, either directly or indirectly. The chances of the survival of the fetus are diminished anyway. Even if you should be able to carry her on to the seventh month and then induce labor the chances of the fetus surviving labor and the neonatal period are not great. There would be considerable detrimental effect on the mother and possibly would shorten her life or even lead to death or to irreparable damage. On the other hand, suppose a woman presented these same symptoms, say, along about the sixth or sixth and one-half month, the chances are better for the fetus living because it is near the viable stage. Altogether we have a more favorable outlook in an attempt to carry her along. Watch her closely during this time.

The difference in the management of these cases depends largely on the period of gestation. In one case delay would be ill advised, and in the other a short delay would be the proper procedure. We have to remember one thing, and that is that the patient probably will never have a better chance to have a baby than with the existing pregnancy, which constitutes the best opportunity that such a woman would have. This is a point that has to be considered. Sometimes we have to consider the number of children the woman already has had. For instance, if this is her first pregnancy and she is anxious to have children, a greater chance might be taken than when she has seven or eight children. It probably would be better to save her life for the children that she already has than to gamble with the present pregnancy. I do not mean that we are bartering with fetal life, but we have to consider many different angles in reaching our judgment as to what is the best thing to do in these cases. I might say as a fundamental proposition in all three of these conditions which I have mentioned that there is not going to be any definite or permanent or lasting improvement until the uterus is emptied. An exceptional case may improve, but this ordinarily is apt to be transient.

We do not often see any lasting improvement while the pregnancy continues. We have really no specific management for these cases. Rest in bed, dietary management and proper elimination, with perhaps some added symptomatic treatment, are suggested.

The hypertension type.—In the hypertension type of cases probably the most important thing is absolute physical and mental rest so far as possible. Keep them quiet and so far as possible avoid anything which may annoy or worry them. Those things in the diet which might tend to elevate the blood pressure should be avoided. Any infection should be guarded against by avoidance of contact with any one carrying these infections. They may prove serious. The termination of the pregnancy in the hypertension case is also important and here we are guided a good deal by the same sort of procedure. Consider whether or not this is the first pregnancy, consider the period of pregnancy, and remember that a woman never has as good a chance of going through a pregnancy as she would have with the existing pregnancy.

The eclamptic type.—We are dealing here more with an acute condition. While undoubtedly there are certain manifest dangers, this affection does not seem to cause as much permanent trouble as do the other types of conditions which we have mentioned. This eclamptic condition may be divided into what is called a pre-eclampsia and a true eclampsia. Pre-eclampsia consists of cases, of course, which are not hyperplastic or nephritic cases. As in the other conditions which I have mentioned, there is no definite tendency to lasting improvement until the uterus is emptied. Here again we are guided definitely by the period of the pregnancy. It is not possible to carry a pre-eclamptic with marked symptoms along even for a short time without the development of alarming symptoms. So that unless something can be gained for the fetus by a few weeks delay, say two or three more weeks, it is better to terminate the pregnancy. In a woman with a definite pre-eclampsia there is no sense in allowing the case to drag along, day after day and week after week, which does the woman more or less permanent damage. The only instance where we can accomplish much for the fetus is the group which is approaching the period of fetal viability, somewhere around the 26th, 27th, or 28th week Here, if the symptoms are not too alarming, by proper rest and diet there may be a chance of securing a live fetus. No delay is advocated in these cases except around the period of viability. In other cases it is best to terminate the pregnancy promptly. After the eighth month practically nothing much can be gained by delaying the termination of the pregnancy. A case, of course, which develops near term should have labor induced, fairly promptly. In these cases active interference is advised; delay is suggested only in those cases where the symptoms are not too alarming. This perhaps summarizes the opinion about the termination of pregnancy in these cases of so-called pre-eclampsia and eclampsia of pregnancy.

Method of termination.—Except where the fetus is dead, drug therapy is of little avail except near term, so one is forced to use some other method. This consists mainly of the introduction of some foreign body or foreign material into the uterus. Various means have been used in the past, the introduction of a dry gauze pack, of a bougie, which is rather slow in action, as a rule, and also the introduction of various forms of bags. Of course, simply the artificial rupture of the membrane will induce labor. Some form of bag seems to be the one means that is the most satisfactory. Other forms of operative interference have been advocated, such as operations on the cervix and operations from above, such as Cesarean section; but these procedures are not very favorably considered because the mortality seems to be rather increased than diminished.

We might consider, briefly, the management of a case by termination of the pregnancy, as indicated in an eclamptic, more particularly after the development of some acute symptoms, such as convulsions. The dictum of one school has been that the pregnancy should be terminated as soon after the onset of the first convulsion as possible. This led to rather violent means for the termination of the pregnancy; these methods are still used. It is better to use rather more conservative and slower means of emptying the uterus. The other treatment would be symptomatic. The convulsions may be controlled in various ways. It is desirable to control these convulsions because they, themselves, do considerable damage. Cases have been reported where many convulsions, often running up into the hundreds, have occurred, and the patient had no disastrous results. On the other hand, patients have died without any convulsions. Usually when a woman reaches the convulsive stage the uterus begins to contract. The same toxin that stimulates the other muscles to contract, causing these convulsions, also causes spasms of the uterus. So if a woman has not already gone into labor at the time convulsions begin she is very apt to with the onset of these convulsions. If she is not in active labor at the onset of these seizures it probably will be necessary to institute some means of bringing on contractions. The best means, I think, is the introduction of some form of bag, as the Vorhees. Aside from the bag treatment we have to consider the use of certain forms of drug therapy. One of the most common forms of drug therapy in use today is the administration of morphine with complete isolation of the patient, absolute quiet, and avoidance of any reflex stimulation. A case of eclampsia which has the nervous system all excited is very susceptible to any influence. A flash of light may cause a convulsion, dropping of a utensil on the floor may cause a seizure. All of these stimuli should be avoided. The use of sedatives, such as morphine, is very valuable. It can be used in a considerable dosage, probably an initial dose of at least ¼ gr. Do not fall into the error of doing things which do not do the patient any good and may do harm. Sometimes strychnine has been given. This hardly seems reasonable. The administration of chloral hydrate is of some value. It is difficult, however, to give large doses by mouth, and difficult to have them retain the drug per rectum because of these convulsive attacks. It is probably wise to supply plenty of fluid and if the patient is unable to take it by mouth, it may be given by hypodermoclysis or intravenously, but do not push fluids in a water logged patient. Intravenous glucose may be used, as suggested for early toxemias.

Venesection has been advised in these cases, but it hardly seems advisable to do a venesection when one is going to terminate the labor because the blood loss at the time of labor cannot always be accurately controlled, and the patient may be unable to stand this additional blood loss. There is another durg which has been used in the past a great deal and has had very ardent advocates. The drug to which I refer is veratrum viride. The fluid extract is about the same strength as Norwood's tincture of veratrum viride. It does seem to work well in some cases. This is administered hypodermically by deep injection. The initial dose of Norwood's can be anywhere from 10 to 20 minims. It was formerly administered in about this dosage and then repeated at rather frequent intervals until the pulse was reduced to 60 or below. In addition to watching the pulse it is wise to watch the blood pressure. In many cases it definitely reduces the blood pressure. I have used this drug in cases where the woman was having convulsions, and the convulsions have ceased. I believe it has a real therapeutic value. It can be used in cases of pre-eclampsia and eclampsia for the purpose of controlling the blood pressure. An initial dose of 10 minims could be given, and if there is no effect the dose may be repeated. Usually there is very definite effect from the first or second dose. In the meantime, one should take steps to induce labor.

We have the three categories of cases of eclampsia, depending on the time when the convulsions begin. There are the antepartum, the intrapartum, and the postpartum groups. In all probability, the antepartum is the most serious of the three, the intrapartum less serious than the antepartum, and the postpartum is probably somewhat less serious than the other two. Some authors have reported a higher mortality in the postpartum group than in the others. The management of the antepartum group I have already given you. In the intrapartum group the labor should be terminated at the earliest opportunity. For instance, in a case which goes through the first stage and starts the second stage with the cervix dilated, it is advisable to terminate the labor unless in a multiparous woman in whom the second stage progresses rather rapidly. In any case, it would be desirable to terminate labor as easily and quickly as possible without any interference by force. In the postpartum group, of course, there is no labor to terminate. Here the treatment would be largely symptomatic and drugs should be used. Control the convulsions and blood pressure by the use of veratrum viride, morphine, chloral and sometimes by venesection. Promote elimination and handle the case rationally and symptomatically.

This, of course, does not exhaust the subject of eclampsia. I have not said very much about the etiology because we do not know very much about it. There are a large number of theories. As a general thing the more theories there are the less we know about a condition. So far as clinical types are concerned, three groups have been presented. In one the chief and characteristic involvement is in the kidney; these undoubtedly are not true eclampsia cases. This may be a nephritis of the glomerular or arteriolar type. In the next group the changes are largely cardiovascular, probably due to arteriolar spasm and leading to vascular and cardiac changes. In the last group the most dominant characteristic pathology is in the liver. So far as the kidney changes in the true eclampsia are concerned, they belong more in the classification of the nephroses than to the groups of nephritis. Probably ultimately we shall find that the cause is either from the fetus or the placenta, but we are as yet pretty much at sea as to the exact etiology of eclampsia. The early recognition of any of these conditions is easy, but requires repeated routine observations throughout pregnancy. Their recognition should be followed by the institution of prompt and effective treatment, which varies with the type of so-called toxemia, its severity, and the period of gestation, as well as the fetal state. The emptying of the uterus is really the only permanently and definitely effective treatment. All other methods are only temporizing to gain definite ends.

DISCUSSION

Dr. P. W. Freise (Bismarck, N. D.): It may seem rather presumptuous in me to discuss Dr. Adair's paper, as it is so very complete. It seems to me that in recent years the patients with toxemic symptoms do not present the desperate appearance they did years ago. There have been some advances made in the treatment by means of using glucose for patients with hyperemesis gravidarum, and the use of magnesium sulphate for patients presenting hypertension and edema. During the past year we used magnesium sulphate for the few patients we had, where it was indicated, and found it to be very satisfactory. I have a case in mind in which the patient was in her sixth month of gestation. She had a hypertension, albuminuria was present, and her general condition justified the consideration of therapeutic abortion. She was a primipara, aged 36, and was very anxious to have a child. We administered magnesium sulphate intravenously, the blood pressure dropped and her general condition improved. The treatment was continued and she was enabled to carry on until the fetus was viable. Labor was then induced and a live baby secured. The patient apparently suffered no ill effects.

As for the patients who vomit, we must first differentiate between those who are neurotic and those who are suffering from toxemia. For the neurotic change of environment, rest in bed, and sedatives in the form of luminal are efficacious. The use of a high carbohydrate diet will, perhaps, prevent the development of more serious complications. The presence of acetone or diacetic acid in the urine is an indication for the prompt administration of glucose intravenously. It is remarkable how the vomiting subsides, the acetone and diacetic acid disappear, and the patient becomes more comfortable.

We were able to treat successfully most of our hyperemesis gravidarum patients; however, in three instances we found it necessary to induce abortion. One of these patients had completed two normal pregnancies and had had two therapeutic abortions. We found it necessary to abort her again. We now feel that if we had administered the glucose more extensively, these apparently necessary abortions might have been avoided.

In conclusion I want to thank Dr. Adair for giving us the opportunity of listening to his splendid paper.

Dr. Adair (closing): This is such a large subject and there is so much to say that I dislike to start talking again. I hardly touched on the treatment, but the point I wish to stress is that we have no specific treatment for these toxemias. The treatment must be largely symptomatic and the main thing is to start it early, before the symptoms are too far developed. The only successful treatment I know of is to empty the uterus. Consequently, we should do this early, preferably by rather slow means rather than attempt to do it forcibly later in the disease. If we wait until the condition becomes so aggravated that we are forced to use haste the results are bound to be bad. The only way we can have good results in these cases is by constant observation, by careful treatment and the early emptying of the uterus.

NEED FOR RACE BETTERMENT

By C. F. Dight, M.D.
President Minnesota Eugenics Society
MINNEAPOLIS, MINNESOTA

The following statements have a bearing on matters of great social importance, and to the first person who conclusively shows that any one of them is inaccurate to any great degree, the author offers to give suitable reward. The offer is open for ninety days.

1. More has been learned about the laws of heredity in the last twenty-eight years than during all preceding time. With this new knowledge, upon which eugenics is chiefly based, man could now purposely improve his brain structure, and thus take into his own hands his further mental evolution and greatly hasten its advance by applying biologic laws and eugenic measures, the effects of which for human good would be almost beyond measure. To fail to do this and to prevent increase of people who are in some way at fault mentally may result in the decay of our civilization.

2. Federal and other statistics indicate that only about one-tenth of the people of various grades of feeble-mindedness are in institutions

for their care, the nine-tenths are at large and procreating much more rapidly, relatively, than normally minded people. The least defective of their offspring are known as high-grade morons.

3. Such morons and the mildly feeble-minded are more harmful to society than the lower grades of feeble-minded persons, because the latter are to some extent segregated, while the former are at large reproducing their unfit kinds. Feeble-mindedness and moronism are inherited in most cases and are incurable.

4. Morons have defective brains, and they often fail to adjust properly to social order. Many of them drift easily into crime. Authorities state that they commit the various offenses against society from five to ten times as frequently as do normal people and produce over three-fourths of the mental defectives of the next generation.

5. Morons tend to marry their kind, and in such matings from 25 to 100 per cent of their children, in any large number of cases, are subnormal mentally, in some way, and are often of the lower grades of feeble-minded or criminalistic. Cases exist where hundreds of socially unfit individuals appear in the same defective family strain, while in other strains the members and their descendents rank as the best of human kind.

6. It is estimated that there are about five millions of morons and mental defectives in the United States; in Minnesota from 80.000 to 100.000. Many of these are listed and at large, revealed by intelligence tests and by their delinquency.

7. Persons committed to the care of the Minnesota State Board of Control, including mental defectives, delinquents, criminals, average about five hundred yearly. These represent perhaps only about one-tenth of the mentally subnormal yearly increase. Larger buildings are required to house them. They are the offspring chiefly of morons at large. Why not check this increase of the wards of the State by sane measures applied at the source of their origin—the defectives at large. A law to do this by sterilization seems to be greatly needed. It would be a humane preventive measure. Its thorough operation would in one generation aid greatly to empty our schools for feeble-minded and delinquents; our asylums and prisons of their inmates. There would be many less defective recruits to take their place.

8. What has been done thus far may be likened to keeping an ambulance at the foot of a cliff to carry to the hospital the people who fall over, while the thing needed, to use a simile, is a railing above to prevent such accidents. The railing, in the simile, would be a suitable sterilization law. Its operation would be a fundamental, practicable means of preventing much crime, delinquency, dependency. It should also increase the happiness of mental defectives by avoiding many children, perhaps defective, for whom they cannot properly care, and society would be benefited by having its citizenry improved and its tax burdens lowered.

9. The cost, direct and indirect, to the people of the nation from the presence of our socially unfit groups is estimated to be more than $500,000 000 yearly; more than one and one-third million dollars daily, Minnesota's part of it being more than $30,000 daily to several times that sum, and which is stated by an authority "to be more than the total of all expenditures and appropriations a year for all branches of the state government." It would not perhaps cost the state of Minnesota $30,000 per year to have its obviously unfit people sterilized under the supervision of a state eugenist, and thus ultimately save the state an expense of many millions yearly.

10. The opinion of biologists is that if our civilization goes as others have gone one cause will be a too large number of socially unfit people. We can no more build a good and stable civilization with an excess of mentally defective citizens than build a good house with rotten lumber. Psychological tests by the millions have shown a regretably low grade of intelligence among the people generally, and this country is said to be the worst of all civilized nations when measured by crimes of violence. One person in 12,000 is murdered in this country every year, it is claimed; in England one in 421.000, thirty-five times more murders per million people here than there.

11. A knowledge and application of eugenics "might have saved other civilizations; it may save ours." To speak in simile "it is believed to be a race between eugenics and catastrophy."

12. American eugenists agree with the British authority, Leonard Darwin, who said that whenever a mental defective is prevented from becoming a parent, the next generation will gain by the absence of one or more persons of inferior stock in at least eighty per cent of such cases.

13. Eugenic sterilization of the unfit is everywhere approved of by physicians, biologists, students of heredity and eugenics. Twenty

states have legalized it. The Supreme Court of the United States has upheld it by a vote of eight to one. It can be done in ten minutes on a man and he may go about his work. It is vasectomy, not castration. Tubectomy, which is the corresponding operation on the female, requires a few days, perhaps two weeks, quiet following it. In neither case does it produce any ill effects, but often improves health in the insane. The natural pleasure of coition is unaffected by it. It does not stand in the way of happy married life, good companionship, mutual help, and love. If desired the reproductive function may be restored by another operation.

14. Prejudice against eugenical sterilization disappears as its simple nature and humane results become known. Sterilization only, in some cases, segregation in others, is necessary for the safety and welfare of society. Of these two means for preventing procreation of the unfit—building more institutions for their segregation or by sterilization—the latter is very much less expensive and not a punishment. Why not urge your legislators to enact an adequate sterilization law at their 1929 session?

PROCEEDINGS OF THE MINNESOTA ACADEMY OF MEDICINE

Meeting of October 10, 1928

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town and Country Club on Wednesday evening, October 10, 1928, at 8 P. M. Dinner was served at 7 P. M. There were twenty-five members present.

The meeting was called to order by the President, Dr. C. N. McCloud. Dr. McCloud reported that the Executive Committee, having charge of the revision of the Constitution and By-laws, had had four meetings since the September evening meeting, and that a copy of the new Constitution had been sent to each member of the Academy. After some discussion a motion was carried that this new Constitution be proposed for adoption at the next meeting, with a few minor changes made at this time.

The scientific program of the evening was opened with the reading of the thesis of Dr. Owen Parker, of Ely, Minn., who had been elected to Associate Membership in the Academy. The title of Dr. Parker's thesis was "Fractures of the Ankle Joint," and after the reading of the paper Dr. Parker showed a number of lantern slides.

DISCUSSION

Dr. Emil S. Geist (Minneapolis): I am sure I voice the sentiments of the Society when I say that we welcome Dr. Parker, who is an old classmate of mine and of others in the Academy.

To come to the subject: These ankle fractures need careful attention. Fractures of the shaft of bones will heal and give the patient a good leg even if they are not in direct apposition. This does not hold good in fractures about the joints: especially about the ankle joint which is a weight-bearing joint, and here exact apposition must be obtained. The slightest deviation from the normal is liable to give the patient trouble. And the time to do this is when the fracture is first treated. The orthopedic surgeon sees a great many old fractures of the ankle which give trouble and it is nearly always due to mal-alignment.

The subject is a large one and cannot be covered in one evening or in one paper. The simple fracture of the tip of the malleolus differs vastly from the severe comminuted and compound fractures that we so often see in industrial work.

I was beginning to think, when Dr. Parker showed his first group of slides, that life in the mining country was easy. The last pictures, however, showed some of the bad problems that one who is doing surgery of the bones has to deal with, and these are the ones that makes one's hair white.

Dr. Parker's explanation of the different types of fractures is, of course, the standard one. In Cotton's fracture there is much backward displacement of the astragalus, and no surgeon can fail to realize that this unreduced will leave a bad, painful joint. It is usually accompanied by a breaking off of a triangular piece of bone from the back and lower end of the tibia. Usually there is not so much backward displacement as in this case. These cases are often neglected. Some years ago I wrote a paper on "Old Fractures of the Ankle," and quite a group of them were of this type of fracture.

Another subject is the compound fracture. We have had in the last few months a few of these compound fractures in the ankle and have taken care of them according to Orr's method with much satisfaction. One of these I saw with Dr. Hynes.

The doctor referred to the use of wire, and talked of using it somewhat under protest. That was my own feeling about wire until about a year ago. When abroad I brought back some Krupp wire. It is an iron wire of great tenacity, and it lies quiet in the tissues. The trouble heretofore was that wire seemed to stimulate osteoclasis. We have used this Krupp wire in quite a number of cases and it is a safe metal to use. There are very few metals which can be introduced near or into bone without causing trouble. Dr. Zierold some time ago did a very nice piece of work along this line. He found that copper stimulates bone growth; that all the alloys inhibit bone growth, and that pure gold and "stellite" lie quiescent. The former is too soft and the latter too brittle for use.

Dr. John E. Hynes (Minneapolis): The case which Dr. Geist mentions was one of compound fracture of the tibia through the internal malleolus with comminuted fracture of the fibula a short way above the external malleolus. Dust and plaster were ground into the wound. We reduced the fracture and drained by a stab wound and put it up in a tight case, liberally smearing vaseline over the entire leg. We then made a window through which inspection was possible, and have left it alone since.

I feel a certain hesitancy about shouting because I do not think that we are entirely out of the woods, as only two weeks have elapsed since the injury.

Dr. Arnold Schwyzer (St. Paul) reported a case of apoplexia mesaraica, or, in other words, "Acutely formed mesenteric blood cyst."

Mr. R. C., 68 years old, weighing 268 pounds, formerly a streetcar motorman, but doing no work for the last ten years on account of heart trouble, was referred to us on September 20, 1928. He gave the following history, which, when viewed a posteriori, is in exact harmony with and straightly points to the operative findings.

Two weeks ago, directly after a meal, he was seized with severe pain in his abdomen to the right of the navel, and had to hurry into the bathroom. His bowels moved and he vomited two or three times. After two defecations that day the bowels became regular again. No vomiting or nausea occurred after that one spell. The pain had been severe enough to make him yell. His family doctor was summoned in a hurry and a hypodermic injection of morphine relieved the agony. The pain was rather severe for three or four days. After this the abdomen remained sore, but this soreness gradually grew less. The treating physician thought an acute cholecystitis the most likely diagnosis. There was great tenderness in the area of the gall-bladder. There was no marked rise in temperature. On the day after the attack, the doctor felt a resistance below the liver, and this became a distinct mass, getting larger and harder during the following days, while tenderness and pain decreased.

Our examination gave, in short, the following findings: The heart action was very irregular in rate and force. No murmurs were heard. The lungs were clear; no râles on the bases. In the abdomen a tumor was felt, which was moderately tender. It reached 5 cm. to the left of the navel and about 20 cm. to the right of it; 12 or 13 cm. above the navel and about 6 cm. below it. The liver dullness barely reached down to the border of the ribs, and there was a tympanitic zone between the liver dullness and that of the tumor. The tumor was firm and smooth-walled as far as one could make out on the large abdomen. We made the diagnosis of either an omental or a retroperitoneal mass. The urine had good specific gravity (1,023) and contained a trace of albumin, no sugar.

After preparing our patient with digitalis and after a cystoscopic examination had shown that carmin blue was secreted from the right kidney within four minutes, while the function of the left kidney was next to nothing, the patient was operated upon on September 24. We now knew that in case the tumor was connected with the right kidney, we were under no condition allowed to sacrifice this organ.

Under local anesthesia a seven-inch incision was made over the right rectus, the peritoneum being opened only in the upper two-thirds of the cut. Upon the mass which, together with the adherent gut, was almost the size of a football, though not as deep, we found two small intestinal loops adherent. In fact, these two loops, which were entirely flattened out, with their mesenteries, the one over the upper part of the tumor and the other covering the lower half, completely concealed the mass from view. The tumor was dense and elastic. We tried to detach the intestinal loops; but the tumor did not have a firm capsule or outline, and either damage to the gut or falling into the tumor unawares seemed unavoidable. Therefore, after detaching and separating the two loops a very little, we inserted a needle for aspiration, and as this did not yield anything, we entered with a fine artery forceps. Only some old coagulated blood was found. The opening was gradually enlarged bluntly, and more and more liquid, old blood and coagula were delivered. It required entering with the finger into the very large cavity and breaking up of the coagula before they could be removed. The finger was moistened each time, before entering, with pheno-camphor to make sure of not contaminating this enormous bloody space. The cavity gradually collapsed and there seemed to be no distinct palpable walls to the cavity which reached far into the right flank. The opening into the cavity remained just large enough for one finger; each time, after breaking up a new portion, it was gently squeezed out and caught in a spoon.

The question to decide was whether we were dealing with a simple mesenteric hematoma or a hemorrhage into a mesenteric cyst or a hemorrhage from a malignant neoplasm. After complete emptying, or at least as complete as seemed proper, the walls showed nowhere a thickening or irregularity to the inserted finger. From the outside through the adherent gut there was no resistance felt either, except a small rounded thickening projecting from the lower pole toward the left. It was smooth-walled and small. No irregularity had been felt from inside and it was, therefore, probably some clotted blood in a recess and not a neoplasm. But should it be such, nothing further was to be done anyway under the conditions. Was it perhaps a hemorrhage into a preëxisting cyst? This also was not probable, because such an enormous cyst would very probably have given some symptoms even if only moderately filled. There remains the possibility of a hemorrhage into a walled-off peritoneal space near the root of the mesentery; but a localized peritonic walled-off process away from the large gut is very rare. I have seen such a condition only once, when we had to deal with a broken-down walnut-sized lymphnode. Thus one had to conclude that we had a hemorrhage from a mesenteric vessel into the mesenteric space between the two peritoneal linings, an apoplexia mesariaca.

I find in the literature, which seems meager, that blood cysts of the mesentery are drained after emptying. This we wanted to avoid. The wound had been handled with utmost care. The cavity was now completely collapsed; there was no trace of fresh oozing. The opening was left as it was; there was no sense in suturing. The abdomen was closed tight.

The postoperative course gave us considerable anxiety on account of the condition of the patient's heart, but to-day (October 10th) the patient is ready to go home and says he feels quite well. He has been out of bed and moving about for several days. The wound healed very well and the abdomen is soft and no masses are felt.

Dr. F. W. Schlutz (Minneapolis) reported two cases:

Case 1.—Tracheo-esophageal fistula. The case concerns a male infant two days old. The antepartum diagnosis of the pregnancy was polyhydramios. On account of a brow presentation, delivery was by version and extraction.

The infant cried vigorously at birth but showed some dyspnea and cyanosis. There was malformation of the right thumb. Labored respiration set in about 10 minutes after birth, cyanosis became very marked, and the use of oxygen relieved this somewhat. Attacks of cyanosis occurred about every five minutes at first, but later decreased in frequency. A pronounced stridor developed; more pronounced during inspiration. Oxygen had to be given almost continuously to maintain the infant's color. An *x*-ray plate of the chest showed the following findings:

"The thymus was moderately enlarged. There was marked displacement of the mediastinum and heart into the left chest. The heart appeared somewhat enlarged and the whole appearance suggested some abnormality in the relation of the heart to the thorax. A laryngoscopy revealed approximation of the false vocal chords during the attacks of severe dyspnea."

Fluids given by mouth were regurgitated. An attempt was made to give water by lavage. The tube was arrested before it was thought to have entered the stomach, and the water was returned almost immediately.

The temperature at the end of twenty-four hours rose steadily to 104.° At the end of forty-eight hours the respiration became shallow and slow.

Post-mortem examination revealed a tracheo-esophageal communication. The upper portion of the esophagus was pouched and ended blindly at the level of the tracheo-esophageal communication. The esophagus below the communication was thick-walled, but narrow. It was patent, and air was found in the stomach.

Examination of the cranium revealed a bilateral laceration of the tentorium. This may have partially explained the stridor.

Case 2. Cyst of the liver.—The case concerns an infant aged eleven months. Birth was normal at term. Feeding history to date is uneventful. One other child is living, is four years old and in good health.

The infant was brought to the General Hospital last August on account of unusual enlargement of the abdomen. No complaint of abdominal pain had been noticed. A diagnosis of cystic tumor of the abdomen (not in the liver) was made. *X*-ray examination (fluoroscopy and plate) showed the entire colon pushed to the left. The right upper half and the left upper one-fourth of the abdomen was filled with a large opaque mass, the origin of which could not be made out.

The patient was referred to the University Hospital in September. At that time the general physical examination, except for pronounced enlargement of the abdomen, was negative. The abdomen was soft. No outline of a mass could be discerned. The liver edge was palpable below the left costal margin near the midline. Percussion revealed dullness over most of the right side of the abdomen. *X*-ray examination again showed the same picture as had been observed previously. The mass displaced the colon downward and to the left.

The possibility of cystic kidney or retroperitoneal cyst was considered. A cystogram was not taken because of an unsuccessful attempt at catheterization.

Exploratory operation was performed September 25. The surgeon's report read as follows:

"On opening the abdomen a large cyst was observed, so large that its limits could not be determined until it was punctured. The liver was practically absent. A small piece of liver tissue was present in the lower portion of the cyst. No liver tissue seemed to be present on the right side above the cyst. The left boundary of the cyst was formed by the left lobe of the liver, and its wall was apparently fused with the peritoneum in the region of the ligamentum teres. The gall-bladder a rather elongated viscus, was present in the lower margin of the cyst wall. The portion of the liver to the right of the cyst appeared normal. No definite duct connecting with the other extra hepatic ducts was made out.

"Following drainage of the cyst, marsupialization was carried out, following excision of a good portion of the free border. Enucleation of the cyst wall was not attempted on account of the extensive dissection it would have required and the danger of extensive hemorrhage. After insertion of a drainage tube the cyst wall was sutured to the parietal peritoneum. The cyst fluid contained no bile pigment.

"On October 4, an *x*-ray examination of the abdomen was made after the cyst had been injected with an opaque fluid. The cyst had decreased in size, containing only about 1.5 c.c. of fluid. The liver shadow was small and the small intestine and the colon had expanded well into the right portion of the abdomen."

The general condition of the child was very good.

DISCUSSION

Dr. Schlutz: I have reported these two cases because both conditions, I believe, are very rare. In the pathological material at the University there are only two other specimens of tracheo-esophageal communication. I have not had an opportunity to search the literature very carefully, but Dr. Phelps, who has done this, tells me it is a very rare condition.

The cyst of the liver, I believe, is still more rare. I have never seen a case like it.

Dr. A. Schwyzer (St. Paul): These two cases are of unusual beauty and interest. The first case, the congenital fistula between the trachea and esophagus, is a rare kind of fistula. It is a very large opening. As a rule, these fistulæ are small. The bifurcation of the trachea is the level where one finds diverticula of the esophagus. The ones communicating with the trachea are rare, and still more rare is a large opening like this. We have a great malformation of the esophagus. There seems to be no real esophagus behind at the tracheo-esophageal communication, therefore it appears that all there was of the foregut at that level was taken up by the formation of the trachea.

The case of the cyst in the liver is of unusual size. Cysts of the liver we see very rarely. I have seen two cases in my life; one was in an adult, an echinococcus cyst; the other case was congenital. We had there, not only both kidneys full of cysts, but we had small cysts on the spleen and on the liver. The size of this cyst of Dr. Schlutz's is surely very unusual.

As to treatment: It seems to me it was wise not to do more. These cysts will shrivel and after a while the capsule becomes hard and firm and the epithelial lining will become exfoliated or can then be cauterized away.

Dr. Thos. S. Roberts (Minneapolis): This specimen (the tracheo-esophageal fistula) bears a curious resemblance to a condition which is normal in some birds. The emu, for example, has a slit-like opening in the mid-trachea almost exactly like this fistula but instead of opening into the esophagus it connects with a sac in the neck which can be distended and adds volume and resonance the bird's voice. Birds as a class have an enormous and complicated system of air cells in the body or other parts of the respiratory tract. They function chiefly in connection with the respiration, but in many species there are special adaptations which have to do with the voice or sexual display. The bare neck-pouches of the common prairie chicken are familiar examples. The tracheal and bronchial rings are variously sacrificed to secure the necessary connections, and certain of these normal openings are called to mind by the vertical slit-like fistula seen in this specimen. An eminent comparative anatomist has said that there is no anatomical anomaly found in the human body that does not exist as a normal condition somewhere farther down in the vertebrate line.

Carl B. Drake, M.D.,
Secretary

THE WORKING OF THE BASIC SCIENCE LAW IN MINNESOTA

The Minnesota State Board of Medical Examiners reports the following prosecutions for practicing medicine without a license and for violation of the Basic Science law insofar as the Basic Science law covers the practice of medicine and surgery.

Williams, Boyd, Minneapolis, Minn. Entered a plea of guilty. Fined $100.00.

Vian (Vian Medical Institute) Osakis, Minn. Claims to be champion of the world on cancer. Entered a plea of guilty. Fine of $250 and if not paid is to serve eight months in the county jail. Fine paid.

McGraw, Robert, Hewitt, Minn. Filed a complaint under the Medical Act charging the defendant with treating one Peter Thompson, a farmer living west of Villard, for heart trouble. The fee alleged to have been paid was $35.00. The defendant entered a plea of not guilty, and after a preliminary hearing he was bound over to the district court for trial. The State presented its case, and at the completion of the same the case was dismissed by the Court. The dismissal took place on June 22, 1928, at Glenwood, Judge Flahery presiding. The defendant is an old offender, he having been arrested four times in Todd County for various offenses.

Kolling, A. J., Minneapolis, Minn. Licensed chiropractor. Entered a plea of guilty to a violation of the Medical Practice Act for attempting to treat syphilis. Fined $150.00 or 30 days in jail. Fine paid.

Stolurow, Peter J., Hamm Building, St. Paul, Minn. Licensed chiropractor. Arrested for performing an illegal operation. Entered a plea of guilty. Sentenced to imprisonment in the State Prison at Stillwater at hard labor according to law, which means up to four years imprisonment.

Schultz, Pauline, Hamm Building, St. Paul, Minn. Licensed masseuse charged with the crime of abortion. Jury trial. Found not guilty.

Errington, Robert, Bellingham, Minn. Unlicensed practitioner known as Kanawana, the Indian Doctor. Early in 1927 found guilty by a jury of practicing medicine without a license and fined $100.00. April, 1928, two complaints filed, one charging him with violation of the Medical Act and one charging him with a violation of the Basic Science Law. June 20, 1928, entered a plea of guilty to the charge of violating the Medical Practice Act. Sentenced to six months in the county jail at Olivia, five months of the sentence being suspended on the condition that he refrain from practicing. After Errington was sentenced he made an attempt to escape his jail sentence by withdrawing his plea of guilty. In this he was not successful, and as a result he entered the Renville County jail on August 27, 1928, and left on the 27th day of September, 1928. The charge to which he entered a plea of guilty involved his taking $250.00 from a farmer north of Bird Island for which sum he was to "cure" the farmer's wife of "heart dropsy." She died within 60 days after the initial treatment from Errington. Errington is out on $1,000 bail in second case. Court convenes in December.

Ewald, Emilie D. K., Olivia, Minn. Naturopathic physician, has no license of any kind. Investigated June 1, 1928, and because of her plea at that time to be given a chance to move out of the state, no complaint was filed. However, she did not leave. August 16, 1928, two complaints filed, charging Mrs. E. with maintaining an office for diagnosis, treatment, etc., of ailments, and a complaint charging her with using a word or words indicating that she was engaged in the healing art, to wit: "naturopathic physician." After a preliminary hearing she was held to the District Court under bonds of $1,000.00. On the 29th day of September, 1928, Mrs. Ewald entered a plea of guilty to maintaining an office, etc., in violation of the Basic Science Law and she was sentenced by the court to thirty days in the Renville County jail; the sentence was suspended indefinitely on the condition that she refrain from practicing in Minnesota and that she leave the state. If Mrs. Ewald attempts to practice healing in this state she will not only be punished for second offense, but she will have to serve jail sentence above imposed.

Koskimaki, W. W. Has no license of any kind, but has taken the massage examination and failed. According to information filed practicing at New York Mills. Complaint filed for a violation of the Basic Science Law and a warrant was issued for his arrest. The deputy sheriff reported that the defendant had left town when he went to arrest him. However, K. returned to New York Mills and was arrested. Released upon cash bail of $500. Case dismissed on defendant's promise to leave the state premanently, which he did.

Kirby, S. R., Thief River Falls, Minn. Promised to close his place of business in letter written county attorney of Pennington County.

Dufort, J. E., Northome, Minn. Admits violation of the law. Took the matter up with the county attorney. Dufort given until the first of August, 1928, to close his place of business.

Miller, Royal, Austin, Albert Lea, Worthington, Minn. Itinerant unlicensed "healer," whose home is at Clear Lake, Iowa, so he says. His work is a semi-massage and chiropractic treatment. Informed that after he works on a patient he washes his hands and the water becomes blue, red, or some color, and he tells the patients that he has drawn off that poison. Miller admitted violating the Basic Science Law. The county attorney after a little talk with him told him to get his hat and coat and get back to Iowa just as fast as he could get there and to stay there.

Beach, Mrs. Frank, Springfield, Minn. Investigated the practice of this lady and found that she had treated a diabetic patient, who lives on a farm about 16 miles from Springfield in Redwood County. The patient was interviewed at her home and after obtaining the evidence filed a complaint and had a warrant issued for her arrest. Mrs. Beach has been living at the hotel in Wanda, a little town about 17 miles from Redwood Falls. She had advertised in the papers at Springfield and Redwood Falls. She is an Indian root and herb doctor. She wanted $100.00 from the patient but she only received $25.00. When the sheriff went over to Wanda to arrest her she had left with her husband. Evidently she had been "tipped off" the previous evening. If Mrs. Beach is apprehended she will be prosecuted to the full extent of the law.

Ross, Charles, alias R. J. Dietrich, Pine River, Minn. The name of Dr. R. J. Dietrich, a reputable physician now practicing in Kansas was assumed by Ross. Thereafter he attempted to operate a hospital at Pine River. His place of business was closed August 15, 1928. He has left the state.

The foregoing report shows that we have six cases to our credit where the defendant paid a fine or was sent to jail or prison; that we have had two defeats, one of which was at the hands of a jurv and the other by order of court. Kirby, Miller, left the state. W. W. Koskimaki left the state. Mrs Beach, when the sheriff went over to arrest her, had left. Twenty-eight other cases investigated in various parts of the state but prosecutions were not instituted for the reason that they either were not justified, or the same result was accomplished as would have been under a prosecution.

It is the intention of the board to see that every phase of the medical practice act and Basic Science Law is fully enforced as it is their duty to so do under the law.

It has taken some time to organize the work and to have it handled in an efficient and dignified manner.

The Board has not resorted to subterfuge in this work but every case prosecuted has been a bona-fide case of actual treatment at the hands of the defendant.

The Board fully intends to continue this work in the same vigorous manner in the future and will continue to do so as long as complaints come in for violation of these two laws.

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OUR WANING IDEALISM

Our medical profession is faced with a critical point in its history. The election of our young men to its ranks, occurring as it does by selection of our best in schools, but for that reason calling forth their closest application to the academic problems at hand, too often results in their putting aside the ideals of the past honored generations of our calling. It has been said, and rightly, "In the old school a man was a gentleman first and then a doctor." The reverse is not necessarily the condition of the present because, I believe, a man must be somewhat of an idealist and a gentleman to aspire to our profession, but it is to be greatly feared that in the acquiring this end idealism is pushed to one side, if not altogether lost.

Now, when the public is demanding more of us than ever in the varied capacities of adviser, instructor, and friend, it behooves us to reflect on those qualities which made our forefathers in the profession the leaders in thought, discussion and public esteem, and to remember that idealism is retained always in the spirit of gentlemen.

—E. T. E.

THE FARM RELIEF SITUATION

A Minnesota farmer inquires "What is farm relief anyhow?" "Mostly, it is the feeling that comes after a strenuous presidential campaign," so says the *Pioneer Press;* and we are led to wonder whether anyone knows anything about farm relief except the farmers. If they were banded together in a good association they would probably get all the relief they want themselves. By the way, what is the matter with having an association for the relief of doctors? We need it very badly because the conditions, in this part of the country, at least, have been so good from an atmospheric point of view that very few people are sick, and that makes it discouraging for the doctors, just as it was discouraging for the farmers during their hard times. So the editor makes the motion that the man who introduces farm relief bills in Congress next session introduce a similar bill to relieve the doctors during a similar period of depression, and make it compulsory that they collect their bills —either because the people like to pay their bills or because some collection agency forces them to pay their bills. Does anyone second the motion? If so, the resolution is passed and will be promptly adopted, we hope.

THE OLD FAMILY PHYSICIAN

There is a very good article in the December number of *Harper's Magazine,* written by a man who has evidently done some work and knows what he is writing about, on the probable return of the old-fashioned doctor. Of course there are numbers of them scattered through the country, and one of our good contributors is one himself, so he says; at least he sends in his contributions signed "The Old Country Doctor."

The author of the article in *Harper's* objects to the attitude of the specialists, whose numbers are legion, and advocates the better training of the medical man for general practice. There are so many of us who depend upon a hospital laboratory, or hospital assistants, internes, and nurses to do our heavy work for us that we sometimes forget we must do it ourselves. The article referred to an article appearing some time before, by Dr. Joseph Collins, of New York, advocating group medicine, and this writer criticizes the attitude of Dr. Collins—whether justly or unjustly it is up to you to decide.

There are many misfits between doctors and patients, that is, there is a broken arch between the doctor and the patient which might be mended if one doctor were more considerate of another. The idea of knowing all the specialties and knowing what to do under all circumstances is not a very good example for the student to follow. But somehow he will make his way when he is called into the country and is called on an emergency case—he will do something that is helpful, if he has any head on him at all, and will not fill the patient full of morphine in doing it, necessarily; he will do the things that he has gleaned from his professors in the medical school and something that will be a credit to his medical teachers and himself.

A FEW BOOKS

The editor has been having a lot of fun reading some books that have recently been published, and among these and peculiarly pertinent to the times, is a book called "My First Two Thousand Years," an autobiography of the Wandering Jew, in which he first asserts that he was present at the crucifixion of Christ and made some scurrilous remarks, when Christ turned to him and said, "Tarry thou until I return." Whether He meant that as an admonition or punishment no one knows. At all events the Wandering Jew traveled and lived like a prince. He finally had his own private valet and visited all the celebrated persons there were. He claims he witnessed the trial of Jesus and philandered with Pilot's wife. He had many bad dreams and decided that Jerusalem was normal. He recites what he thinks was the madness of John, and tells of his many pleasant visits with the Princess Salome. Then he gives details of the first marriage and tells of the time when he was accused of dealing with the devil. He finally arrived in Rome, and he said, "I tempt the gods and sneeze." He translates Nero's poems; and there are thirty or forty chapters dealing with his experiences that make very interesting reading.

The authors hit on rather a novel idea in portraying the wanderings of this Jew, and they carry him over the globe quite effectively. He visits many important places, cities, and countries, and evidently is very well entertained. Other imitators sprang up who called themselves the Wandering Jew, and eventually he disappears—where, no one knows. But he has had a lot of fun and traveled extensively and visited gayly even though his period of life covered what his authors claim for him, two thousand years. You know we are in the habit of saying the first hundred years are the hardest, but the Jew who wandered two thousand years has no fault to find with his life, apparently. This book is written by George Sylvester Viereck and Paul Eldridge. One of the things the editor enjoyed particularly about this book was that the chapters are very short and cover a great deal of territory.

Another book, called "A Variety of Things," by Max Beerbohm, is a series of delightful essays on celebrated people. In the course of his story telling about these famous characters he tells some lively anecdotes of T. Fenning Dodworth, and some of his repartee is very clever. The book as a whole contains but ten essays, all of them very interesting and written with great care and beautifully printed. There is only one Beerbohm and no one like him to write an essay as he does, very high class and yet wholly entertaining. He has written a few fairy stories for the sophisticated, so popular in the nineties. Anyone who reads this will enjoy it.

Here is another very good story, "Political Behavior" by Frank B. Kent, of New York, a book of politicians and their ways. Walter Lippman says this man knows more about political behavior than anyone writing to-day. The editor gathers from reading this story, for it is in reality a story although it is a continued argument for politicians, that Mr. Frank Kent is more or less of a Democrat, but he does not allow it to detract at all from his opinion of political parties. His opinion is certainly good, and he rather intimates that the politicians of to-day have the situation pretty well in hand and know beforehand who is going to be elected in the end, before the candidate himself is aware of it; that it is a carefully planned political fight.

But if you insist upon reading something better, or at least in a different vein, you ought to read William Allen White's "Masks in a Pageant," discoursing on all the presidents from Harrison down to the present incumbent. He has a sharp tongue often, and he analyzes things very carefully and clearly, but he says a great many true things that make rather lively reading.

The editor does not want to conclude this editorial without including another type of book, a book called "Eat, Drink and Be Healthy" by Clarence W. Lieb, M.A., M.D., the best book on dietetics he has ever read. Dr. Lieb writes in a very clever way, and the introduction is particularly interesting. This puts a little different complexion on food stuffs, but judging from what the editor has seen of the comments, many of our medical men agree in the main with Dr. Lieb.

Then, too, there is a book called "The Brain and the Mind," by Berry, an English authority, a text-book in medicine, a very large book costing eight dollars. It probably will be boiled down after a while and get into a shorter text-book, but it is well worth reading if one can get a copy.

MANNERS AND METHODS WITHIN HOSPITALS AND WITHOUT

The writer is inclined to comment briefly on the methods and manners of hospitals and to assert that hospitals are growing not only more popular with the people in general but are taking better care of the people in their charge than ever before. For this reason, if we ever expect to make Minneapolis a medical center, our hospitals must be well advertised throughout the Northwest and some explanation as to methods of treatment and care of the individual must be given out.

Perhaps some man or woman is taken sick and goes to the physician and is given skillful attention, but the patient suddenly decides he must go to a hospital in the city. Why? Because he thinks the hospitals are run much more carefully and have the benefit of a large number of staff men and also because of the fact that he thinks patients are more carefully examined, scientifically so, not only as individuals but as sick people, and that they get a great deal of attention from the nurses and the hospital staff, day and night. Even if they have gone simply for a diagnosis they are much more comfortable about themselves to know that their troubles, whatever they may be, have been anticipated or to learn, perhaps, that they are in fine form.

A friend of the writer's, a man of seventy-five, was in New York not long ago and went to a New York hospital. When the attending physician came around he said, "What is the matter with you?" The patient replied, "Nothing, but I want you to look me over." The patient spent three or four days in the hospital, and the attending physician pronounced him absolutely sound. The patient went away with the feeling that he had been looked after skillfully and properly, and he was satisfied to know he was in good condition.

Then, too, the hospitals of the present day are much different from the hospitals of twenty or thirty years ago. They are better built, they are kept cleaner, and furnished with the latest appliances for comfort in the way of beds and toilet rooms or lavoratories and bathrooms. They have a sufficient corps of nurses so that the nurses can devote their attention to one floor only and need not go from one floor to another. Less medicine is being given to or taken by patients in a hospital than used to be the case. The hospital drug departments are very small and contain but few medicines or drugs of any kind, and the doctors thereby are gradually being initiated into giving the patients less medicine and more care.

Of course one readily understands that in the country it is often very difficult to get a patient into a hospital or into consulting quarters, and the men in the country are now realizing the importance of it, and the result is when a man in the country has a patient with whom he needs assistance he does not send him off at once to a distant city but takes the patient (or the family take the patient) in an automobile to the nearest well-known hospital or clinic. The patient may not get any better care. And very often the man in the country is much displeased by the lack of attention he receives; he gets the dribblings of a practice, he is poorly paid, and he has not the facilities or what conveniences he should have to work with. Going to a hospital is less feared than formerly. The patients know they are going where they will not only be looked after but be well cared for.

One objection to the hospital in the large city is that in having patients brought from a distance they have the lapse of time to contend with and the sudden entrance into an unknown situation, of which they know but little and can find out but little because the information that comes from the family is not always valuable; sometimes it leads farther away from the patient's disorder than if no information was given. At the same time every institution of any importance that has facilities to offer will do its utmost to get patients in a perfectly ethical manner, devoid of politics, but, unfortunately, not devoid of families. The greatest menace to a hospital, either in the city or in the country, is the visiting of admiring and questioning friends. We remember seeing in one hospital in a large city on Sunday afternoon approximately three hundred people walking through the corridors, and on inquiry it was found they had gained admittance because the nurses had been careless in the beginning and had not restricted visiting hours carefully enough. The average case of whatever type, surgical or medical, needs a little isolation once in a while, needs a rest from friends, and, even more, a rest from various relatives. The relatives, however, think they are very important, but in the eyes of the doctor they are one of the greatest nuisances he has to contend with. Where a patient enters a hospital for an examination or for a rest the superintendent and the nursing force have a great deal of latitude in what they do. For instance, the admission of a telephone at the patient's bedside is a delight to the patient, but is hard on the relatives and, incidentally, hard on the patient because the relatives are bound to know every hour or two how the patient is getting along. This is not an exaggeration at all. If they would ask the doctor in charge about the patient's condition they would get valuable information, but they ask the patient while he is sleeping or resting, or perhaps reading, thereby disturbing the mental outlook of the patient and making him worse rather than better. The average layman thinks the more he visits his sick friend the better the sick friend will be, but the doctor knows that by keeping all visitors away for a time the patient gets along very much better. It is almost offensive to the relatives and friends to think that such a thing is possible, but it is a fact, nevertheless. So all patients, of whatever kind, surgical or medical, are much better off if they are left to the consolation that they are going to be looked after and are not going to be visited to death; that they can either get well or die of their own special diseases. Visiting hours, wherever demanded, should be carefully considered and should be definitely respected as to time and frequency. Then the patient will have a chance to get hold of himself and gain much thereby. If the undesirable friends, whoever they may be, of whatever race, who insist upon performing what they thing is an official duty, could be classed among the pests who do no one any good under any circumstances, it would simplify matters. The man who assumes charge of a patient when he is sent to the hospital should be in complete authority and the relatives should be very carefully and insistently trained in that direction.

MISCELLLANY

WAR ON DIPHTHERIA IN NORTH DAKOTA

The North Dakota State Department of Health, working in conjunction with the United States Public Health Service, is making a determined fight against diphtheria in the state. The slogan adopted by the department is "No More Diphtheria in North Dakota by 1930."

North Dakota, according to figures sent out by Dr. J. D. Jungman, shows that there were 216 cases of diphtheria in the state in 1927 and that 32 deaths resulted. Dr. Jungman, after listing six facts in connection with diphtheria and its prevention, says, "The State Department of Health advocates a campaign for the prevention of diphtheria and will gladly send a representative to explain in detail the approved methods of placing this protective measure before the community."

The six facts, as listed by Dr. Jungman, follow:

1. Diphtheria can be prevented 100 per cent.
2. This can be brought about by the use of Toxin-Antitoxin, a safe, harmless, easily administered preparation, which may be secured by the physician from the local druggist or direct from any of the various biological manufacturing houses.
3. It is administered hypodermically, one cubic centimeter is given once a week for three weeks and will immunize for seven years and possibly life.
4. There is no danger and it can be given with safety to any child over six months of age, no sore arm, or anaphylaxis is noted.
5. Practically every state, county and city of any progressive instinct whatsoever is adopting or has adopted this protective Public Health measure.
6. There have been no reports of any ill effects from the use of Toxin-Antitoxin.

HEALTH DEPARTMENT IS ON THE JOB

The North Dakota State Department of Health is functioning upon a business-like and uncompromising basis, and this statment is borne out by the recent conviction of Dr. C. I. Spannare, of Fargo, on a charge of failing to report cases of communicable diseases to the state department, in accordance with the law. The Fargo physician was fined $25 and costs. Dr. J. D. Jungman, Bismarck, director of the bureau of communicable diseases, charged that the physician had failed to make reports on several cases treated by him, and that prescribed cards sent out by the department had been unanswered and no reports made.

With an accurate check upon diseases in the state, and with the number of cases of all kinds steadily decreasing, the efforts of the department of health should be commended by everyone, and certainly strict co-operation by physicians must be included in the general endeavor. Dr. Jungman is proving that he is on the job with vigilance and consciousness of his duty to the state, and he and the courts will be applauded so long as they uphold the laws pertaining to the health department.

—The Bismarck Capitol.

BOOK NOTICES

Gynecology for Nurses. By Harry Sturgeon Crossen, M.D., F.A.C.S., Professor of Clinical Gynecology, Washington University Medical School and Gynecologist in Chief to the Barnes Hospital and the Washington University Dispensary; Gynecologist to St. Lukes Hospital; Consulting Gynecologist to the Jewish Hospital, St. Johns Hospital, and the St. Louis Maternity Hospital; Fellow of the American Gynecology Society and of the American Medical Association. 365 pages. Engravings, including one color plate. St. Louis: C. V. Mosby Co.

Crossen's "Gynecology for Nurses" is a compliment to the present high intelligence of the nursing profession. The book is divided into two parts, the first part being an excellent short description of anatomy, physiology and diseases of the pelvis. The second part is devoted to details of gynecologic nursing. This has been done in meticulous detail with elaborate diagrams and illustrations, many of which are new to one who is familiar with Crossen's previous medical text-books.

—C. J. Ehemberg, M.D.

The Medical Clinics of North America. (Issued serially, one number every other month.) Volume 11 Number 5, (Tulane University Number, March, 1928). Octavo of 261 pages with 35 illustrations. Per clinic year, July, 1927 to May, 1928. Paper, $12.00; cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company.

This number contains many good papers. The "Clinics" of Dr. C. C. Bass on malaria is very interesting.

Other papers, such as "Sickle-cell Anemia," "Epidemic Encephalitis," "Treatment of Paresis by Malaria," and others, make this volume very worth reading.

—A. E. Cardle, M.D.

Clinical Medicine. By Oscar W. Bethea, M.D., Ph.G., Professor of Therapeutics, Tulane Graduate School of Medicine: Professor of Clinical Therapeutics, Tulane School of Medicine, New Orleans, La. Octave volume of 700 pages. Philadelphia and London: W. B. Saunders Company, 1928. Cloth, $7.50 net.

The preface of this volume states that it was written for the use of those physicians who must practice medicine at a distance from a medical center where the great majority of patients must be treated in the home and where every advantage of modern science is not available to the physician. In reviewing this book, then it is important to keep in mind the purpose for which it was written.

Considering its scope, it is a very compact volume with a total of 50 pages out of the 700 devoted to an index. Roughly speaking, it is a combination of the "Principles and Practice of Medicine" by Osler, plus a compend of therapeutic treatment such as Sattuck's, plus occasional case histories and frequent explanatory asides from the author's experience. From the standpoint for which the book was written it does an excellent service. It presents in clear, concise language a brief survey of the disease under discussion and follows this with an outline of a form of treatment which may be applied in the home. Of necessity, then, many diagnostic points are omitted, and the book is far from complete in the sense that it covers the whole field of medicine. For instance, under the heading "Diseases of the Endocrine Glands," hyperthyroidism is the only subject treated. There is no discussion of the several types of colitis, but the book does include a good discussion of pellagra, tularemia, epidemic encephalitis, and acute poliomyelitis. Under the section "Disorders of the Nervous System," most of the strictly neurological diseases are omitted; but the articles on neurasthenia, hysteria, insomnia, and the functional nervous disorders, so frequently passed over with a hackneyed. conventional statement of the disease entity and its treatment, are discussed so admirably as alone to be worth the price of the book. These very common syndromes frequently find a physician sterile in ideas and helpless in directing a course of treatment. The presentation of Dr. Bethea's experience with this type of case is a welcome addition to the field of medical literature.

The section on "Tuberculosis" is admirable, containing not only a great deal of common sense but a wealth of detailed information regarding the fine points of diagnosis and care. The author pauses long enough in his short volume to spend five pages with illustrations to show in detail how to apply effectively adhesive strapping to a chest.

From the standpoint of the physician searching for highlights in differential diagnosis and special forms of treatment this book may be a disappointment. Its subject matter on the treatment of disease frequently falls down because it deals with the common everyday diseases for which the medical profession has yet to evolve a specific and effective form of treatment. For instance, the section on the arthritides contains the same general information to be found in any volume on the subject, and when one has finished he realizes how helpless is the physician in the treatment of this condition. This is not the fault of the author.

In the section on "Diseases of Metabolism and Nutrition" there are excellent and detailed dietary instructions and the discussion is especially good in that subdivision on the underweight asthenic type of individual. Very little mention is made of the use of liver in the treatment of pernicious anemia, but it was perhaps too recent an institution at the time when this section was written to be included in the book.

The section on "Diseases of the Heart" contains the usual information in condensed form, and the section on the "Specific Infectious Diseases" is fairly complete.

The book is marred by the frequency of typographical errors, such as a reference to the "spasmodia" of malaria to which the patient may "succomb." No doubt future editions of the book will eliminate this apparently careless proofreading.

In reading the book through for the purpose of review, one is occasionally struck by the verbatim repetitions of statements used on previous pages or under other disease headings. These are usually illustrations or details regarding medication. This doubtful fault would of course be obviated were the reader browsing about studying this or that disease.

This book is excellently bound and easy to read. It should constitute a great boon for those physicians whom the author had in mind, and there are several sections that are worthy of being read by every physician.

—Norman Johnson, M.D.

Preventive Medicine. By Mark F. Boyd, M.D., C.P.H., Member of Regular Field Staff, International Health Division of Rockefeller Foundation; formerly Professor of Bacteriology and Preventive Medicine in the Medical Department of the University of Texas. Third Edition, Revised. Octavo volume of 475 pages with 151 illustrations. Philadelphia and London: W. B. Saunders Company, 1928. Cloth, $4.50 net.

This concise text by Boyd is a valuable aid to the practicing physician and student on questions of preventive medicine. Its brevity makes its material more readily accessible; those wishing further detail will find numerous references.

Dr. Boyd believes that physicians are neglecting their opportunities regarding preventive medicine; and if the neglect continues the opportunities will lessen and the field taken away from physicians by a changing public sentiment.

—C. A. McKinlay, M.D.

Operative Surgery. By J. Shelton Horsley, M.D., F.A.C.S., attending Surgeon St. Elizabeth's Hospital, Richmond, Va., 893 pp., with 756 original illustrations; illustrated by Miss Helen Lorraine. Third edition. St. Louis: C. V. Mosby Company, 1928. Price, $15.00.

This edition begins by dealing with the fundamental principles of surgery, incorporating experimental data wherever indicated, going into accurate detail wherever it aids in the explanation, and illuminating his ideas with figures often enough to keep one's mind keenly in the right trend.

From general considerations the author goes to surgical drainage, sutures, blood vessels, and the various phases involving blood, from the ligation of bleeding vessels to the operative repair of arteries. Details of technic are emphasized and elaborated, all to the advantage of the reader.

Then the healing processes are dealt with. The healing of bone, the repair of nerves, scar formation, etc., are accurately described.

Plastic surgery and the restoration of all deforming conditions and the repair of all mutilating diseases or injuries are next described. To these conditions he devotes a great deal of space, accurately describing plastic operations, surgery of the face and head, restorative operations on the spine, amputations of both the upper and lower extremities and including the surgery of the thorax and its contiguous structures.

The remaining third of the book is devoted to surgery of the abdomen and its contents. He describes and illustrates with figures the various common operations on each organ. This includes a description of the hernia operations, the most frequent operations performed upon the stomach, resection and restoration of injured bowels, common operations upon the gall-bladder, and appendix, concluding with the most frequently performed operations upon the genito-urinary tract.

For the general surgeon this book is very well adapted. Long and tedious explanations of rare conditions are pleasurably few and for one who is interested in obtaining a great deal of practical information in operative surgery, this book can be well recommended.

—Carl O. Rice, M.D.

A Text-book of Surgery. By W. Wayne Babcock, M.D., F.A.C.S., Professor of Surgery and of Clinical Surgery in the Temple University, Philadelphia; Surgeon to the Samaritan Hospital and to the American Hospital for Diseases of the Stomach. Octavo of 1,367 pages with 1,050 illustrations, 9 of them in colors. Philadelphia and London: W. B. Saunders Company, 1928. Cloth, $10.00 net.

Modern surgery is a constantly moving, growing science. Ideas and methods of twenty-five years ago have been vastly changed, those of ten years ago noticeably altered. What was once called good surgery is now no longer worthy of the name. Hence text-books of surgery must be frequently renewed, re-edited, and new authors displace the old. Nor do such books attain to such encyclopedic proportions as formerly. After all, an encyclopedia is merely an impersonal collection of ideas, and, to the practical surgeon or practitioner, a work which embodies the actual experience and convictions of one eminent surgeon is of far greater interest and help than the former. Such a personal volume is Wayne Babcock's new "Text-Book of Surgery."

In his preface he says: "I have, therefore, written in a dogmatic vein what practice and study have made me believe is true today. If tomorrow I progress to an opposing point of view I shall not lose faith. I shall still be dogmatic." And further on: "By standardized practice lives are saved. No longer should patients die from appendicitis because they are fed and purged; or from prostatic obstruction because of lack of preparatory treatment: or from anthrax because the lesion is traumatized. Such dangerous forms of practice, many of which remain as traditions, should be expurgated." And again: "I have tried to omit the controversal, purely theoretical, and obsolete except as they may be instructive or have historical interest."

Especially interesting is the chapter on regional anesthesia, the greater part of which is given over to spinal anesthesia, indicating the trend of surgery toward an almost ideal form of anesthesia which is safe and effective in competent hands.

The drawings are excellent, and there are few typographical errors.

Altogether, this is a thoroughly modern work, which yet gives deserved credit and reverence to orthodox surgical traditions.

—E. A. Rygh, M.D.

NEWS ITEMS

Dr. Anton Hyden has moved from Bowdle, S. D., to Alcester, S. D.

Dr. L. W. Krueger has moved from Mapleton, Minn., to Amboy, Minn.

Dr. David S. Robbins, of Minneapolis, has taken over the hospital at Pine City, Minn.

Contracts for the foundation of the Lutheran hospital at Jamestown, N. D., have been let.

A favorite subject for talks on tuberculosis by experts is "Tuberculosis in the Teen Age."

Dr. Eugene Scott, of St. Paul, was married last month to Miss Joan V. Peters, of Cold Spring, Minn.

Dr. G. F. Walter, of Minneapolis, has become associated with Dr. J. A. Sanford, of Farmington, Minn.

Examinations of nurses for certificates to practice in Minnesota was held in St. Paul, Duluth, and Rochester last month.

Dr. C. F. Dight, of Minneapolis, President of the Minnesota Eugenics Society, gave a talk on "Eugenics" over the Radio Station W.R.H.M. last month.

Dr. Sigfred Eng, a graduate of the University of Minnesota Medical School, class of '14, has moved from Cottonwood, Minn., to Jackson, Minn.

Dr. H. J. Kooiker has moved from Albert Lea, Minn., to Milaca, Minn. Dr. Kooiker is a graduate of the Medical School of the U. of Minn., class of '18.

Dr. C. M. Griswold, on the Staff of the Battle Mountain National Sanitarium at Hot Springs, S. D., has been transferred to do general work at Milwaukee, Wis.

Dr. M. J. Lindahl, a recent graduate of the Medical School of the U. of M., who took his internship at Ancker Hospital, St. Paul, has located at Winthrop, Minn.

Dr. N. T. Owen, of Rapid City, S. D., was appointed by Governor Bulow, a member of the State Board of Health, to fill the vacancy made by the resignation of Dr. F. E. Clough, who has moved to California.

Dr. Thomas Waugh, who practiced for a number of years at Parke River, N. D., and is now a resident of Canada, is a member of the Saskatchewan Legislature.

Dr. R. L. Bower, an eye, ear, nose and throat specialist of Chicago, has become associated with Dr. Rolfe Tainter, of Fargo, N. D., under the firm name of Drs. Tainter and Bower.

Dr. Macnider Wetherby and Dr. Eunice Hilbert, both of Minneapolis and graduates of the Medical School of the U. of M., classes of '23 and '25, respectively, were married last month.

The two-day courses in tuberculosis given in Minnesota are attracting much attention. More physicians (40) than could be accommodated registered for the course at Worthington last month.

The County Nurse at Carlton, Minn., is organizing classes in home hygiene and the care of the sick. Twelve weeks in this line of work should be productive of great good to the community.

The twenty-first anniversary of Mrs. Frances Campbell's superintendency of the Nurses' Training School of The Ancker Hospital, St. Paul, was celebrated last month by planting an elm tree in her honor.

Dr. F. F. Kumm, a graduate of the University of Minnesota Medical School, class of '24, now practicing at St. Petersburg, Florida, has been appointed Assistant Superintendent of the Minnesota State Sanatorium at Walker, Minn.

The physicians of International Falls (Minnesota) and Fort Frances (Ontario) have organized a medical society and will hold monthly meetings, alternately, in the two cities.

Dr. William P. Lee, of Northfield, Minn., died last month at the age of 56. Dr. Lee graduated from the Medical School of the University of Minnesota in the class of '94 and practiced in Fairfax, Minn., until 1920, when he moved to Northfield.

The corner-stone of the new University of Minnesota Hospital, for Crippled Children, was laid last month. This is known as the William Henry Eustis Hospital, the money for its building being the gift of a distinguished citizen of Minneapolis, Mr. Wm. Henry Eustis.

On November 23, Dr. List, Superintendent of the General Hospital of Minneapolis, and Dr. J. C. Michael, Chief of the Neurological Service, were summoned to appear before the grand jury of the County to testify regarding the lack of facilities to handle mental cases in the city.

Dr. Robert M. Burlingame, of Watertown, S. D., died last month at the age of 55. Dr. Burlingame was a graduate of the Minnesota College of Physicians and Surgeons, class of '99. He formerly practiced in Madison, S. D., for a number of years before going to Watertown.

Dr. John H. Rindlaub, formerly head of the section of Ophthalmology and Otolaryngology, Fargo Clinic and St. Luke's Hospital, Fargo, N. D., is now pleasantly located in the First Trust Building, Passadena, California, with his practice limited to diseases of the eye, ear, nose and throat.

At the annual meeting of the Interurban Medical Society (Duluth and Superior), held last week, the following officers were elected for next year: President, Dr. E. Z. Shapiro, Duluth; vice-president, Dr. H. A. Sincock, Superior; secretary and treasurer, Dr. N. H. Gillespie, Duluth.

Intensive efforts to educate young girls, particularly, in the dangers of food fads and dieting will be made in the public schools of Minneapolis. Mrs. Palmer Romaine Bowdish is acting executive secretary of the Hennepin County Tuberculosis Association, and is directing Christmas Seal activities.

At the twenty-first anniversary meeting of the Minnesota Public Health Association, held in Minneapolis last month, the following officers were elected: President, Dr. J. A. Myers, Minneapolis; vice-president, Dr. O. O. Locken, Crookston; secretary, Mrs. Ora Trautman, Comfrey, Minn.; treasurer, Dr. W. A. Laidlaw, St. Paul.

Dr. C. P. Farnsworth, one of the Directors of the Sanitarium and Hospital of Chamberlain, S. D., has decided to move to Madison, Wis., to again associate himself with a hospital in that city with which he was connected before moving to South Dakota. Dr. Farnsworth has just returned from a visit of observation to the leading hospitals of the East.

At the annual meeting of Graduate Nurses, held in Minneapolis, last month, the following officers were elected: President, Miss Margaret Hughes, St. Paul; second vice-president, Miss Hannah Swenson, Minneapolis; secretary, Mrs. W. F. Rhinow, Minneapolis; director, Miss Clara Webber, St. Paul; general secretary, Miss Caroline Rankielleour, Minneapolis, Minn.

At the North Dakota State examination of nurses, held at Grand Forks and Bismarck last month, certificates of registration were granted to 111. Of this number 39 were from Fargo, 19 from Bismarck, 16 from Minot, 11 from Grand Forks, 8 from Jamestown, 6 from Devils Lake, 4 from Grafton, 3 from Rugby, 2 from Williston, 1 from Kenmare and 1 from outside the state.

Dr. Arthur H. Steen, a pioneer physician of Cottage Grove, Minn., died last month at the age of 78. Dr. Steen was a graduate of Rush Medical College, class of '74, and he came to Minnesota soon after graduation. As a pioneer he shared in both the hardships and the pleasures and honors of pioneer practice. He occupied the same office in Cottage Grove for over fifty-two years. Five physicians got their entire training in his office, and he officiated at over 5,000 births. He was prominent in Masonic circles for many years.

The Hennepin County Tuberculosis Association has opened the 1928 sale of Christmas Seals. The day after Thanksgiving nearly 65,000 letters containing Seals went out to Minneapolis homes, and activities have begun in earnest to raise funds for carrying on 1929 tuberculosis work. This year special concentration is being made to lower the death rate of young persons between the ages of 15-24, among whom the death rate has declined only half as much as among the population at large. It is expected that the sale in the Northwest will be much larger than in any past year.

Annual Memorial Meeting

The annual memorial meeting of the Hennepin County Medical Society was held on November 7. The principal address was given by the Rev. David Bryn-Jones, of the Trinity Baptist Church of Minneapolis; and short biographical sketches of each of the seven members who died in 1928 were given by members of the Society as follows:

Deceased	Biographical Sketch by
Dr. Herman G. Franzen	Dr. C. D. Harrington
Dr. George G. Eitel	Dr. W. B. Roberts
Dr. John G. Cross	Dr. A. T. Mann
Dr. C. Wesley Bishop	Dr. J. S. Reynolds
Dr. Louis Dunn	Dr. G. D. Haggard
Dr. H. H. Frudenfeld	Dr. Thorvald Peterson
Dr. H. H. Kimball	Dr. A. S. Hamilton

Locum Tenens Wanted

For two and one-half months during the session of the North Dakota Legislature, starting between Christmas and New Years. Address W. H. Porter, M.D., Colvin, N. D.

Practice Wanted in South Dakota

In a town of 1,500 or more. Preferably in eastern part of state. By a general practitioner. Address 545, care of this office.

Locum Tenens Wanted

Beginning on November 15 and will last until January or March. Opening may be permanent position. The location is in a small town. Address 539, care of this office.

Position as Secretary Wanted

By a woman of large experience, who was ten years in her last position and can give the best of references. Will work in a physician's office or in a clinic. Address 538, care of this office.

Practice for Sale—Splendid Opening

Deceased physician's office equipment and half interest in hospital in one of the best towns in Western Minnesota. Practice pays from $12,000 to $15,000. Can be had on easy terms. Address 543, care of this office.

Technician Wants Position

An *x*-ray technician, experienced in clinical laboratory, physical therapy, and metabolism; also a typist wants a position in a clinic or hospital. Thoroughly competent and can give best of references. Address 526, care of this office.

$40,000 Practice for Sale

Two physicians desiring to retire will sell their practice, including small hospital equipment, if desired, for cash. No real estate. Location, a thriving Northwestern college town of 6,000 population. Address 544, care of this office.

For Sale In South Dakota

A good paying general practice. Locum tenens did $451.00 while I was away last month. Invoice price of modern office equipment takes the location. Practice established since 1907 in County-seat town. Collections were 98 per cent last year. Address 541, care of this office.

South Dakota Practice for Sale

A $12,000 to $15,000 medical and surgical practice of a doctor recently deceased in a town of 700, large farming community and no competition. Opportunity of becoming county health officer. Hospital and office in connection. For details write Dr. Vennegut, Hague, N. D.

Laboratory and Dietetic Technician Wanted

A small sanatorium in Wisconsin devoted to the treatment of diabetes, high blood pressure, and nephritis, wants a girl who is capable of doing laboratory work and assisting in *x*-ray work, and capable of taking charge of the trays in the kitchen and giving the patients instructions in dietetics. Also should know how to purchase food and overlook the housekeeping. Will pay $100.00 a month with full maintenance. Address 547, care of this office.

Physician Wanted in North Dakota

Egeland, N. D., wants a doctor. Egeland is situated on the Soo Railroad and also on the branch of the Great Northern out of Devils Lake. Our closest towns having M.D.'s are Cando, sixteen miles south and Bisbee, fourteen miles west. There is nothing north to the Canadian line or east to Langdon, so the territory has unlimited possibilities. For any more information the interested party may write Seiverts Drug Store or Mr. M. J. Borgerson at Egeland, N. D.

EXAMINATION REPORT, MINNESOTA STATE BOARD OF MEDICAL EXAMINERS,

OCTOBER, 1928

BY EXAMINATION

Name	School and Date of Graduation	Address
Bonesteel, Henry T. S.	U. of Colo., M.D., 1926	Mayo Clinic, Rochester, Minn.
Damm, Walter Philip	U. of Iowa, M.D., 1927	961 Selby Ave., St. Paul, Minn.
Davison, Hugh Loyd	U. of Pa., M.D., 1924	Irwin Apt. No. 24, Rochester, Minn.
Davison, Richard Milton	U. of Minn., M.B., 1928	University Hospital, Minneapolis
Emmons, William Frank	McGill, M.D., 1924	Mayo Clinic, Rochester, Minn.
Fortier, George M. A.	U. of Minn., M.B., 1928	St. Joseph's Hospital, St. Paul, Minn.
Fulcher, Oscar Hugh	U. of Va., M.D., 1926	Mayo Clinic, Rochester, Minn.
Krantz, Clement Ireneus	Johns Hopkins, M.D., 1924	Box 419, Duluth, Minn.
Lacy, Nicholas Eugene	U. of Mich., M.D., 1926	Mayo Clinic, Rochester, Minn.
Langenbahn, Carl Joseph	Northwestern, M.D., 1928	Ancker Hospital, St. Paul, Minn.
Magee, Henry Ross	U. of Manitoba, M.D., 1923	102 2nd Ave. S. W., Rochester, Minn.
Mohardt, John Henry	Northwestern, M.D., 1927	Mayo Clinic, Rochester, Minn.
Morehead, Dewey Edison	U. of Minn., M.B., 1924, & M.D., 1925	613 Wash., Ave. S. E., Minneapolis
Morton, Herschel B.	U. of Nebr., M.D., 1925	Mayo Clinic, Rochester, Minn.
Morton, Silvanus Archibald	Dalhousie Univ., M.D., 1926	Mayo Clinic, Rochester, Minn.
Pertl, Albert Louis	U. of Iowa, M.D., 1928	Abbott Hospital, Minneapolis
Ray, Edward Hunt	Tulane, M.D., 1922	Mayo Clinic, Rochester, Minn.
Richards, Raymond Randolph	U. of Ill., M.D., 1928	Ancker Hospital, St. Paul, Minn.
Rude, Joseph Oscar	U. of Minn., M.B., 1928	Fairview Hospital, Minneapolis
Ruedemann, Ehrhardt	U. of Mich., M.D., 1926	Mayo Clinic, Rochester, Minn.
Sarff, Oliver Elton	U. of Minn., M.B., 1928	Virginia, Minn.
Smith, Junius Penny	U. of Iowa, M.D., 1928	2528 Portland Ave., Minneapolis
Swart, Howard Allan	Toronto Univ., M.B., 1926	103 6th Ave. N. W., Rochester, Minn.
Wall, C. Ragnar	U. of Minn., M.B., 1927	1386 Edmund St., St. Paul, Minn.
Yesko, Stephen Aloysius	Georgetown Univ., M.D., 1922	Mayo Clinic, Rochester, Minn.

BY RECIPROCITY

Bateman, Clarence Virgil	Northwestern, M.D., 1925	Mountain Lake, Minnesota
Daniels, Luman Elmer	Rush, M.D., 1921	918 Univ. Ave. S. E., Minneapolis
Demo, Percy William	U. of Iowa, M.D., 1927	1717 1st Ave. S. Minneapolis
Hall-Kent, Alcina Edith	Manitoba Univ., M.D., 1925	2215 Glenwood Ave., Minneapolis
Larson, Milo Henry	Marquette, M.D., 1928	Barrett, Minn.
McEnaney, Clifford Thomas	St. Louis Univ., M.D., 1925	30 7th Ave. N. E., No. St. Paul, Minn.
Marsh, Howard LaRue	U. of Ill., M.D., 1926	Eveleth, Minn.
Mattison, Percy A.	U. of Colo., M.D., 1927	Winona Clinic, Winona, Minn.
Powelson, Harry Clay	Ohio Univ., M.D., 1924	Mayo Clinic, Rochester, Minn.
Thompson, Fred Rush	U. of Ill., M.D., 1920	517 5th St. S. W., Rochester, Minn.

NATIONAL BOARD CANDIDATE

McCaughan, John Milton	Wash. Univ., Mo., M.D., 1926	Mayo Clinic, Rochester, Minn.

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THE RECOGNITION AND TREATMENT OF GOITER*

BY ARNOLD S. JACKSON, M.D.
Jackson Clinic
MADISON, WISCONSIN

In spite of the efforts that have been made by the municipal, state, and national governments, there are in the United States to-day more persons afflicted with goiter than ever before in the history of the country. The number of cases among school children alone as revealed by recent surveys is appalling. In some localities as many as 90 per cent of them show evidence of goiter; yet children comprise only a portion of those suffering from thyroid disturbance; many thousands of adults since the first of the year have undergone medical or surgical treatment and probably more operations will be performed for goiter this year than ever before in the annals of medical science. Hundreds of patent medicine concerns will continue to fleece their victims, for chiropractors and other cultists have not found the cause of goiter so baffling as has the physician. Goiter has become so prevalent that it can no longer be looked on as a regional disease. The millions of persons afflicted far exceed in number those suffering with such diseases as cancer and tuberculosis, and it is apparent that great opportunity is offered to those unskilled in the knowledge of goiter to take advantage of the people.

Nor are the cultists and patent medicine concerns entirely to blame, because so much confusion has existed in the medical profession itself that grievous mistakes and errors have been common. Erroneous information has emanated from the very sources of learning and from the most excellent teachers. The very literature of a decade or two ago concerning diseases of the thyroid is now obsolete in many respects; yet in spite of rapid progress in the treatment of goiter we are as far from determining the actual cause as were our ancestors. It is true that most of our scientific data and knowledge tend to show that the very prevalent simple type of colloid goiter as seen in school children is due to a relative insufficiency of iodin. The work of Marine and his associates has become generally known and accepted. Professor McClendon has shown that an inverse ratio exists between the incidence of goiter and the iodin content of the water. He has found by testing the water in the northern cities, where goiter is prevalent, that a scarcity of iodin exists. The contrary is true in southern localities. In spite of the preponderance of the evidence in favor of the theory of iodin deficiency as the cause of simple goiter, a number of workers refuse to accept this idea. Among these are McCarrison, whose studies in India strongly suggest the possibility of infection as the important factor, and Crotti, in this country, who supports this view.

Whether or not sufficient time has elapsed to state definitely that iodin will prevent goiter in children is still a question in my mind. Because my own studies on the use of iodin in children proved rather disappointing, I recently visited Marine in his laboratory. He feels positive that iodin will prevent goiter in children if it is properly administered, but does not maintain that iodin will cure goiter once it has developed. If Marine is right, then by administering 10 mg. of iodin a week throughout the school year to children between the ages of seven and twenty, it should be possible to prevent goiter. While I have not been able to convince myself on this point, I have strongly advocated the use of iodin for the prevention of goiter in children, and shall continue to do so unless more effective methods are demonstrated. I have been able to prove to my own satisfaction, after studying a group of more than 800 children from a period of one to five years, that the results from the use of iodin in the actual treatment of colloid goiter are frequently disappointing. Only rarely has a considerable reduction in size occurred, and on the basis of the wealth of data that I have collected I no longer consider iodin effective in the treatment of goiter. Similar conclusions have been reached by workers in England, Australia, and Canada. Kitchen studied a group of 350 children for eighteen months and reported that desiccated thyroid produced fewer failures than did iodin, and there was marked improvement in a greater number. Tiffin reported observations on a large number of children in the Washington schools, that showed disappointing results with idoin.

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*Presented at the Forty-first Annual Meeting of the North Dakota State Medical Association, held at Devils Lake, N. D., May 23 and 24, 1928.

What then is to be done in the way of treatment for the many thousands of girls and boys between the ages of twelve and twenty that have colloid goiter. For several years I have been giving to such children 1 or 2 grains of desiccated thyroid gland a day for two or three months and then 30 mg. of iodin a week for the balance of the school year. While the results have not proved entirely successful I have felt that in many cases the growth of the gland was checked, and the development of adenoma perhaps prevented.

Once an adenomatous nodule has appeared, I do not believe any form of medication will bring about its removal. Adenomas may develop slowly and cause no symptoms for many years, or they may grow so rapidly as to cause considerable dyspnea and discomfort at an early age. In time about two in each 100 cases undergo malignant degeneration, usually with fatal consequences. Practically all adenomas undergo calcareous, cystic, or hemorrhagic degeneration, giving rise to the old type of confusing textbook classifications. Occasionally acute hemorrhage will occur causing severe dyspnea. Substernal projections develop in 75 per cent of the adenomas giving rise to more or less dyspnea. Only about 2 per cent become intrathoracic, but in these cases the diagnosis is frequently incorrect and the patient treated for such conditions as asthma and pleurisy.

Approximately half of these adenomatous goiters show evidence of hyperthyroidism by the time the patient has reached the age of fifty. These symptoms usually develop so gradually and insidiously that the patient or his physician may overlook the true condition. Frequently the patient is treated for months or years under the assumption that he is suffering from hypertension, myocarditis, or nephritis. In fact all of these conditions do develop in the course of time but only as secondary complications. At first the patient may experience an occasional attack of cardiac palpitation and tachycardia; there is a gradual loss of weight and strength, and a slight tremor may be observed. The fact that a goiter has been present for fifteen or twenty years and has apparently never caused trouble, may throw the patient or his physician off his guard. It is in just such cases that one should be on the watch for incipient hyperthyroidism. A simple test is that of the blood pressure because sooner or later hypertension develops. The gland is irregularly enlarged, there are no thrills or bruits; exophthalmos does not occur unless Graves' disease is superimposed. The patient may have difficulty in climbing stairs if a weakness of the quadriceps muscles has developed. In the history one notes the absence of the acute onset and of the gastrointestinal crises and extreme emotional disturbances observed in exophthalmic goiter. Likewise, the patient is more quiet and composed.

Yet the risk of operation in these cases is considerably greater than in exophthalmic goiter. During the past year at the Jackson Clinic, no deaths occurred following operation for exophthalmic goiter, but there were two deaths in cases of toxic adenoma of long standing. There is serious and permanent damage to the cardiovascular-renal system in these chronic cases and death usually occurs from cardiac failure. Although Lugol's solution is thought to be of great benefit this has not been borne out in our experience. Whether or not digitalis should be used is a debatable question. For the past few years Plummer has abandoned the use of digitalis; others, as Crile and Lahey, continue digitalizing their patients.

Of course these patients should be encouraged to undergo operation at an earlier age before toxic symptoms have developed. Then the operative risk is comparatively negligible, operation being performed as a prophylactic measure.

Adenomatous goiter never becomes toxic before the patient has reached the age of thirty unless it is provoked by iodin medication. The syndrome that develops from the indiscriminate use of iodin was recognized by Kocher and Breuer, and on account of its resemblance to exophthalmic goiter was termed iodine Basedow. Such cases have been reported in the literature at various times and have been looked on as exophthalmic goiter induced by iodin. This gave rise to the commonly accepted view that iodin is a dangerous remedy in the treatment of exophthalmic goiter, and it has been only six years since Plummer disproved this idea. Inasmuch as the clinical picture of iodine Basedow differs from that of toxic adenoma and exophthalmic goiter, and also the pathologic condition varies markedly from the latter, it seems to me that this syndrome should be considered a distinct clinical entity, and I have suggested for this the term "iodin hyperthyroidism." I recently reported a series of fifty such cases, in six of which Lugol's solution administered by family physicians was responsible for the condition; three of these terminated fatally. In seven cases patent medicines were responsible for the development of toxicity. The average age of the patients in the series was thirty-five years. Tremor, nervousness, loss of strength, and insomnia occur as in the other forms of hyperthyroidism. The short duration (about two months) of the onset of symptoms, however, closely resembles that of exophthalmic goiter. There is a characteristic form of nervousness, and rapid loss of weight without the typical variable appetite observed in patients with exophthalmic goiter. Likewise no thrills and bruits are noted. The blood pressure findings are not of diagnostic importance as in the two other types of toxic goiter. The basal metabolic rate averages plus 29 per cent as against plus 51 per cent in an equal number of cases of exophthalmic goiter.

I am sure that many of you have seen, or will see, cases of iodin hyperthyroidism, as physicians in all parts of the country are reporting them. The promiscuous methods that have permitted the wholesale distribution of iodin by the druggist and even by the family grocer are responsible for many cases. Although there is very little danger of provoking iodin hyperthyroidism in children, no adult should be permitted to take iodin except under the direction of his family physician. Moreover, no adult should receive iodin in the treatment of goiter for more than three weeks except in cases of pregnancy, or of suspected exophthalmic goiter, or in the preoperative treatment of exophthalmic goiter or toxic adenoma. Since iodin has little or no effect on adenomatous goiter, and only temporary action on colloid goiter, it should not be given if there is even a reasonable possibility of inciting iodin hyperthyroidism.

In marked contrast to the gradual onset of hyperthyroidism in toxic adenoma is the sudden development of symptoms in exophthalmic goiter. The time seldom exceeds three or four months, although there is a chronic form of the disease. Usually there is rapid loss of weight accompanied by a variable appetite that may be ravenous. This symptom is observed in no other form of goiter, nor in any other disease except perhaps diabetes. Among the chief complaints are insomnia, emotional instability, palpitation, tachycardia, intolerance to heat, excessive sweating, nervousness, tremor, dyspnea, and weakness, especially on climbing. Prominence of the eyes may be observed by friends and relatives, but in many of the most advanced cases no exophthalmos is noted. It is a mistaken idea that this sign as well as thyroid enlargement are characteristic, since they are often absent. As a result many typical cases are overlooked and the patients treated for disorders of the heart or stomach. However, a characteristic staring expression of the eyes is usually present. The old eye signs known as Stellwag's, and Graefe's are of little significance.

The peculiar type of nervousness observed in these patients is so typical that in many cases the diagnosis may be suspected at once. The patients are constantly changing their position, fingering their hair, or picking at the bedclothes. The elbows and knees often become chafed from the constant tossing about in bed. This extreme restlessness and nervousness is not observed in cases of toxic adenoma.

Physical examination may reveal typical weakness of the quadriceps muscles when the patient is asked to mount the examining table. He may hesitate momentarily, or instinctively grasp the sides of the table to assist in the effort, whereas the hysterical person or the neurasthenic will usually step up with no effort. When the hand is extended from the shoulder and the fingers are spread apart there is usually a tremor, either fine or coarse. One should bear in mind, however, the numerous pathologic states in which tremor occurs. The gland may be neither visibly nor palpably enlarged, or it may be many times the normal size. If enlarged it is symmetrical, unless it is distorted by adenomas, which are present in 25 per cent of the cases. If the thumb or index finger is placed lightly over the superior thyroid vessels a thrill may be felt, while the stethoscope may detect a bruit. Although these signs are characteristic they are frequently absent.

The blood pressure findings are of great importance and serve to distinguish exophthalmic goiter from toxic adenoma. In toxic adenoma, it will be remembered, hypertension occurs. In exophthalmic goiter, on the contrary, the systolic blood pressure is normal or only slightly elevated, except in cases of long standing when hypertension develops. The diastolic blood pressure is low, usually between 60 and 70. In this respect it simulates aortic insufficiency. As a rule it may be said that the greater the pulse pressure the more toxic the condition of the patient.

I shall only mention some of the typical signs and symptoms. The basal metabolic rate in exophthalmic goiter is a study in itself. It will suffice here to say that the rate rarely exceeds plus 100 per cent although it may go as high as plus 150 per cent. In this respect, however, it differs from toxic adenoma, where the maximal rate is plus 65 per cent. A further point of difference may be noted in the fact that exophthalmic goiter progresses by a series of waves at the crest of which there is a gastro-intestinal crisis with fever. Toxic adenoma is a slowly progressing disease without these periods of remission and with no gastro-intestinal disturbance.

I have talked at length on the diagnosis of goiter as I feel that to most of you it is of greater importance and of more interest than a detailed discussion of surgical technic in the treatment of these lesions. I shall add only a few remarks on the surgical treatment.

Five or six years ago arguments were rife in medical societies as to the respective merits of Roentgen rays or surgery in the treatment of exophthalmic goiter. This is now a dead subject, due to the remarkable results that have been obtained through the use of iodin. I have been using it since 1922 in the pre-operative and post-operative care of these patients and have yet to see a case in which the response was not brilliant. It has always seemed to me that large doses gave the best results. As a rule, my patients are prepared during the week preceding operation. On the morning of the operation they receive a great deal of nourishment in addition to the large doses of iodin, and this is carried on by means of the duodenal tube, not only during the operation, but continuously. They leave the operating-room in almost the same general condition in which they entered it, since only the morphin-scopolamin-novocain form of anesthetic is used. Only specially trained nurses are in charge in these cases, and with conditions ideal the prognosis is usually excellent.

During the past four years only one ligation operation was performed, and this was merely a test case. The patient had been on iodin treatment elsewhere for four months. At first she had gained weight and showed marked improvement; then a tolerance to iodin developed, the heart became decompensated, auricular fibrillation developed, and she was in a really critical condition. This brings up an important point for the family physician to remember: No patient with suspected exophthalmic goiter should be kept on iodin treatment for more than three weeks. The longer surgery is delayed, the more lasting and serious is the cardiac damage and consequently the graver is the prognosis.

Although we are performing primary thyroidectomy in every case, post-operative hyperthyroidism is not seen with the methods which we are using. The cases in which a slowly progressing hyperthyroidism has persisted for several years offer a serious surgical problem. Usually the patients will do well for two or three days, but then the weakened myocardium fails to respond.

In conclusion, it might be said that one of the greatest problems confronting the physician and surgeon is to educate the laity to the dangers of the promiscuous use of iodin in the treatment of goiter, and to the importance of early surgical intervention.

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DISCUSSION

Dr. A. L. Cameron (Minot, N. D.): I would like to ask Dr. Jackson, in reference to the slide of the twelve-year old girl, how he knows it is a colloid goiter, and how we can distinguish them from the hyperplastic type, which is the most frequent type encountered at that age.

The second thing I wish to mention is the exophthalmic goiter in which there was no enlargement of the gland. I have yet to see a case of hyperthyroidism without an enlargement of the gland. Perhaps it is impossible to demonstrate on physical examination, but at operation I have never seen one in which there was not some enlargement of the gland. I do not say that it does not exist, but many able men are looking for it and have never found it.

With reference to iodin therapy, I think Plummer is responsible in part for the mistaken idea in medicine that iodin is of comparatively recent origin. If you will review medical literature of one hundred years ago you will find that the beneficial effects of iodin in these conditions were being emphasized at that time, and the deleterious effects as well. This is an old subject. Plummer popularized the use of iodin, one may say he rediscovered it, but it is an old procedure and one that was almost discarded for a time, just as blood transfusion was almost discarded for a time. Iodin is certainly a most valuable therapeutic agent in the treatment of goiter, usually preliminary to operation. I think it should be emphasized that so far as our knowledge goes iodin transforms a hyperplastic thyroid into a colloid goiter. That is as much as we know in respect to its action. Plummer has theorized, I think, to an extent where he is subject to severe criticism on the subject of the action of iodin in the treatment of goiter, stating that it supplants a deficiency in the production of iodin activity. He has never demonstrated that there is a deficiency in the first place, and in the second that any alteration of thyroxin renders it inert in replacing the metabolism. That is a fact that is worth bearing in mind.

With reference to the classification of goiters, I think that while it is proper to be a careful clinical observer, and to attempt to distinguish between types of diseases one meets with, that it is treading on dangerous ground to attempt to differentiate these things on clinical findings only. To be on safe ground we must correlate the clinical with the pathological and surgical findings, and I am sure Dr. Jackson will agree that there is reason to doubt the clean-cut differentiation of these three types by means of pathological and physical examinations.

Dr. Paul H. Burton (Fargo, N. D.): I am sure we have all enjoyed Dr. Jackson's paper, as goiter is one of the most live subjects before medical men to-day, and probably one that is generally a little misunderstood. I think it is Herschler who says that the medical treatment of exophthalmic goiter is as criminal as the medical treatment of cancer. Lahey says that in all fibrillating hearts, goiter should be looked for, and we have proved that fibrillating hearts with aortic insufficiency are practically the only conditions that are brought back to normal by surgical treatment of goiter.

Dr. Jackson emphasized the giving of iodin, and that it should be given only under the very strict supervision of the physician. We have seen several cases recently that have been on this therapy but not kept under strict observation. The patients got better for a while, but finally went to someone else or came to us after they had passed through the really safe operative period.

I believe, with Dr. Jackson, that it is possible to have exophthalmic goiter without any evidence of tumor. We have had some bad cases in patients who have come in with gastric crises, and have been able to benefit them greatly by giving sodium iodid intravenously. In a clinical sense the finger-nail sign, separation of the nail from the matrix, may be of help as a diagnostic aid. Richter reports 93 per cent cures of patients free from any evidence of increase in the metabolic rate. He says that this applies over a five year period, 60 per cent cures, with about 30 per cent gradually improved, 7 per cent slightly improved, and 3 per cent unimproved. Medical treatment would probably give an inverse ratio of these figures. Richter claims that the reason many men get such a low percentage of cures is because of the removal of too little of the gland. A few years ago we were doing lobectomies, but to-day we are no longer doing them.

Dr. Jackson (closing): I will answer one or two of the points which were brought up and thank Dr. Cameron and Dr. Burton for bringing them out. The more I go around to meetings, the more I learn, and I have studied this subject just long enough to realize that I know very little about it. I have much to learn.

Dr. Cameron brought up the question of how to determine whether the goiter in the case in question is colloid or hyperplastic. He is looking at it from the pathological side, and I from the clinical side. To me, there were no evidences of toxic symptoms, and I associate hyperplasia of the gland with toxic symptoms.

As to enlargement: I agree with Dr. Cameron that the gland is always pathologically enlarged, but I can show him any number of cases in which clinically there is no enlargement whatever. I think he will agree about that point.

It is true that the use of iodin has been known for a long time. Back in 1864 Trousseau perhaps took too many highballs one night and in writing a prescription ordered iodin instead of tincture of digitalis, and in two weeks, much to his surprise, the patient was greatly improved. I think to-day we would be like a bunch of sheep, as the profession was in the past—I think we would still be afraid to use iodin in exophthalmic goiter if Plummer had not shown us its value. There is really very little that is original in medicine, after all.

Dr. Burton brought out again the failure of not removing enough of the gland, and that is a good point. Many unsuccessful results are due to this, and I wish to warn you that it is not good to keep these patients too long on Lugol's solution following operation. One of the men working with Lahey brought this out in an article a few months ago. They had a good many recurrences a few years ago and started doing more radical operations, and then giving an increased amount of iodin following the operation, which evidently resulted in the development of myxedema in several instances. We rarely give iodin for more than three weeks following operation, unless there is some definite indication for it.

REMINISCENCES OF A MEDICAL VETERAN*

By Kenneth Bulkley, M.D.
MINNEAPOLIS, MINNESOTA

The toastmaster has assigned to me the task of talking to you on the rear line work of the Medical Corps during the World War. This, because of its size, is an impossible assignment. Instead I shall try to give you a bird's-eye view of the development and work of just one hospital behind the lines, trusting that each of you will find in my recounting parallels which will stir in your memories your own service. Such a narrative must, perforce, smack of the individual, so I trust you will forgive personalities. The organization I shall describe is that eventually carried in the Archives of the War Department as American Red Cross Military Hospital No. 2. I shall have to go back a bit to give you an idea of its inception.

In 1916, twelve years ago, my running mate in New York, Dr. James Worcester, returned from a four months' tour of voluntary duty in France. It was a lovely spring day, such as this has been, and he and I sojourned to the old Polo Grounds to see the Giants and Pirates do battle—a somewhat different battle to be sure than he had been witnessing in France. We estimated the crowd as about 35,000, and Jim remarked that approximately that number had fallen on the first day of the first battle of the Marne.

So when, early in 1917, my old chief, Dr. Joseph A. Blake, of New York—and I cannot mention him without a word of eulogy, for to my mind he is the surgeon than whom America has produced no finer, either in his knowledge of embryology, anatomy, pathology in the living, or in his technic, nor in his gentlemanliness—so when, as I said, Blake cabled asking me to come to France to assist him in the opening of a new hospital for the support of which he had by his own efforts raised the necessary funds, I was filled with enthusiasm; and, thanks to the kindness of Cornell University, where at that time I was doing full-time teaching, a year's leave of absence (later to be prolonged to two and a half years) was granted me. And off I sailed—civilian of course, for America had not as yet decided to throw her shoulder to the wheel. I shall not bore you with an account of our passage—a most interesting one—nor of our arrival in France. I might only mention that America did decide to do her bit just before we sailed, that our sailing was delayed a week, and that I had the privilege of being on the first boat to leave any port after America's declaration of war, and crossed the seas without escort, without cannon, without marines, and without troops.

In Paris I found Blake had taken over Doyen's old private hospital. Doyen was then dead—and Blake, Kenneth Taylor of St. Paul, Jackson of Philadelphia, Montgomery of Boston, and I started housecleaning. In overalls we worked for two months, building Balkan frames, tearing rugs up and tapestries out, sweeping dust, and burning cobwebs; and, above all, removing all traces of the former owner, Doyen, dean of French surgeons, and, from what we found, arch-crook of all doctors of all time. For we threw away barrels of chalk and magnesia which he was selling at fabulous prices in ounce lots as a cancer cure; and packing boxes of the paper cartons and labels in which he was dispensing his fake. We transformed his underground railway and pickeling vats, used by him for body snatching, into a useful laundry and delousing system, and, finally, quite house-cleaned—we asked the French to send us their worst. And they did, not only wounded, but personnel, for, mind you, we at that time were civilians and under French regime. First came our French military superintendent, an efficient chap, but withal the most difficult person with whom to deal. And then came our wounded—Frenchmen all, old chaps, with long mustachios, and many of them bearded—"cultivateurs" or farmers as we called them. For remember, young France was then dead and the draft had already called men of forty or older to the colors. They were a brave lot, cheerful, phlegmatic, inured to hardship, children all, taking with childlike faith and simplicity whatever came. Our organization grew, and ere long we had the strangest assortment of personelle. Our housekeeper was an English boarding-school mistress, small in statue but efficient. Our first *x*-ray man had been discarded by every branch of the British service because of a bad heart. He was not even a doctor. Our nurses were not nurses, but chiefly volunteers. Our assistants were medical students. Our laboratory workers were volunteers. Our enlisted personelle did not exist—we were not yet militarized—we had paid and volunteer civilian help. Our French wounded fell in with organization marvellously. We were kept busy. The French Military supplied us with an evacuation system to southern France, and always the new wounded came, the same examples of bearded fortitude. And then began to arrive the occasional American Volunteer Ambulance Driver—members of the Norton-Harjes unit, and the American Ambulance Service with the French Army. Kids all, chiefly college undergraduates and high school students—brave boys, but children, not soldiers. And in due course of time, as American organization in France progressed, we were recognized and militarized. In the interval of six months we had seen changes. I shall never forget the arrival of Pershing's first small army of regulars and their parade through Paris in July, 1917, bedecked with roses, and Pershing's memorable "Lafayette, we are here" over the latter's grave.

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*Read by title at a dinner of Medical Veterans of the Great War at Minneapolis, June 14, 1928.

And then came the period of militarization, with gradual accretion of personelle and organization along American military lines; the gradual transference of French patients and personelle and the acquisition of American patients. And with it the welcome transition from horse meat, black bread, saccharine, and sugarless jam to American commissary food.

And then the remarkable American wounded. I say *remarkable*, because those of us who had long cared for the phlegmatic older type of French farmer looked forward with some trepidation as to how the high-strung young American would "take his medicine," so to speak. And they were marvellous, those boys. At first they came in small groups. And then out of the blue came Chateau Thierry and its wounded 5th and 6th Marines, hordes of them, it seemed to us—so many that every inch of the hospital had a stretcher and stretchers of wounded for thirty-six hours covered three city blocks of sidewalks awaiting admission. And then the organization of the triage, or distributing room, the steady file through *x*-ray room to operating room. And the poor old operating room! Designed by Doyen for one table, it now held four, each averaging two cases per hour for efficiency, including not only operative work but anesthetization and dressings. And the poor old dining-room! Doyen must have turned in his grave. Four tables going there too, twenty-four hours a day, with never a chance to "de-spot" the floor. Imagine it, had it still had its original tapestries and rich deep rugs, with an extra half inch of dirt beneath for good measure! And the poor old sterilizers—how they sputtered and fumed and rebelled, finally entirely breaking down! I remember well, operating for a steady thirty-six hours, stripped to the waist naked, with nary a glove or a gown, or even a sterile towel unless boiled. And how those volunteers worked! I could name the wife of one of our now Minneapolis millionaires, who passed instruments for me and at the same time acted as my only assistant for forty-eight consecutive hours, held five legs in succession one morning for amputations through the thigh, and yet never until a week before that time had seen surgery. And the volunteer clerks! Girls who had never before soiled their hands, who recorded accurate operative findings for almost days at a time, spattered with blood, and not flinching. I could record a thirteen year old boy volunteer who for twenty-four hours was responsible for, and gave all pre-operative morphine hypodermics for eight operating tables.

And then comparative quiet, while we caught up, evacuated, replenished supplies, and found our breath. And after that the Soissons affair of July, with its avalanche of wounded, not volunteers this time but from the slums of New York,—bootblacks, street-sweepers and the riff-raff of the city—all nationalities represented. What Americans they were? I handled hundreds of their wounded and saw thousands. Without regard to race, creed, or color, there was not a yellow streak in a man.

And then the line of battle worked further and further away. From being practically a casualty clearing station, we changed to a base hospital, and things quieted down. But the interest and work were always there. Instead of fresh débridements and gas-gangrene amputations, we now had the later results to care for—the osteomyelitis, the secondary amputations, the tedious dressings, the complications. And so it went to the end, the organization holding, most of the personelle changing, but each, whether functioning temporarily or relatively permanently, doing his bit.

And so, gentlemen, each of us medical men was called upon to do his share—some in the monotony of our daily routine, caring for the home civilian population; others with the still greater monotony of executive desk work, here or abroad; many with the irksome cares of training camp duties; a large number fighting their own weakness on the unaccustomed high seas, and withal doing their duty manfully; many serving gallantly in the front lines and sacrificing life and limb in their untiring efforts to conserve the health of troops, to help men die more easily, to be transported more safely, and recover more comfortably; and many in the casualty clearing stations, ambulance trains, and base hospitals, shouldering responsibility and slaving to prevent the god of war from taking his unjust due.

And now, fellow-practitioners and ex-soldiers, the war is gone and long over with, and is, thank

God, with most of us only a memory. Some of you will bear its imprints for the duration of your lives, not only mentally but in physical disablement. To all such goes our deepest sympathy.

But what of the future? Probably chemistry, which now in a night can wipe out the life of a city, or the development of aeronautics so that the speed of planes is greater by 76 feet per second than the speed of a bullet, will make future wars impossible. But if not, what? What will you and I do? I pray God that physically each of us will still be able to do his best and that with that physical strength we have the moral courage of the French to do and do and do, and the philosophy in so doing to join with them, take what comes and say "C'est la Guerre."

LETHAL FACTORS IN ACUTE INTESTINAL OBSTRUCTION*

By L. R. Boies, M.A., M.D.
MINNEAPOLIS, MINNESOTA

In an effort to evaluate the treatment of acute intestinal obstruction as cared for in private practice, a study was made of twenty consecutive cases, which represented the experience of one hospital over a period of three years. These twenty cases had been under the care of ten physicians. There were thirteen deaths,—a mortality of 65 per cent. In surveying the records of these cases, two facts are significant. The seven patients whose outcome was successful had particular attention given to pre-operative and post-operative fluids, and to the factor of a hypochloremia. In the thirteen fatal cases, these particular factors had not been given the same amount of consideration.

Obviously, a series this small with rather incomplete data is inconclusive. It suggests, however, in the light of the developments in the past four or five years in the treatment of acute intestinal obstruction, that had attention been given to dehydration and loss of chlorides, other factors being equal, the mortality would not have been as high.

In recent years there has been a steady stream of contribution to the literature on this important subject, a summary of the important facts of which is the purpose of this paper.

From the historical standpoint it has been interesting to note that between the time of Kocher's treatise on ileus,[1] published in 1898, up to about 1920 little that was new was suggested in the treatment of intestinal obstruction except the ever-emphasized matter of early diagnosis and the procedure of enterostomy.

During the past few years experimental and clinical investigation has been focused on the changes within the blood and tissues and has brought to light certain facts.

The beginning of our newer understanding really dates from 1912, when Hartwell and Hoguet[2] made the interesting observation that life in a case of intestinal obstruction may be prolonged by saline injections. Tileston and Comfort,[3] in 1914, reported a rise in the non-protein nitrogen of the blood; in 1918 McCann[4] observed the increase in the carbon-dioxide combining power of the plasma, and in 1920 MacCallum[5] and his associates described the fall in blood chlorides in intestinal obstruction. Since then numerous clinical and experimental observations have corroborated these facts and established means of their practical application.

We now believe that the chief lethal factors in acute intestinal obstruction, in cases where there is no damage to the bowel or interference with the mesenteric circulation, are (1) hypochloremia, (2) dehydration, (3) starvation. When there is damage to the bowel wall, a fourth factor obtains, which is a toxemia resulting from the products of protein decomposition. The relative importance of this fourth factor in its rank among the others, depends on the amount of absorption and the degree of toxicity of the absorbed material.

The hypochloremia is believed to be brought about chiefly through vomiting, and it has been shown that the fall of chlorides in the tissues parallels that in the blood[6] and that the loss of chlorides from blood and tissues corresponds to the total amount lost through all the channels of elimination. As a result of this hypochloremia there seems to be a fatal alteration in the chemistry of the blood and tissues, which has been prevented by the administration of sodium chloride. An explanation of the apparent protective action of the saline has not yet been satisfactorily made. Haden and Orr[7] assigned to the chloride ion a specific protective neutralization of the toxin. Others[8] have expressed the belief that the relief obtained is primarily the relief of a dehydration.

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*Presented before the New Asbury Hospital Staff, Minneapolis, Minnesota, February 1, 1928.

The significance of the rise of non-protein nitrogen in the blood appears to be that of a dehydration and a rapid reduction of kidney function. It is thought that the hypochloremia is a factor in the mechanism of this rise.

The increase in the carbon-dioxide combining power of the plasma is indicative of a trend toward an alkalosis and, if severe enough, leads to tetany. Acetone bodies in the urine in the presence of this rise have been described.[9]

In several of the fatal cases in the series referred to, a solution of sodium bicarbonate had been given by proctoclysis, or used for gastric lavage, in the belief, I suppose, that an acidosis existed. Without determining the presence of an acidosis, the administration of alkalies would seem to be a dangerous procedure.

From the practical standpoint, as an aid to diagnosis, McVicar[10] has suggested that in addition to the usual clinical features arising from an organic or functional ileus, namely, vomiting, dehydration, neuromuscular irritability, prostration, low blood pressure, oliguria, or anuria, the most significant diagnostic criteria are obtained from a study of the blood chemistry, to determine the changes previously referred to. A rough estimate of the extent of chloride depletion may be made by silver-nitrate precipitation of the chloride in the patient's urine, using an equal quantity of normal urine for control.

For operation, spinal anesthesia[11] has been recommended by those whose experience in it has been large, as a factor in reducing the contributory effects of surgical shock, claiming for it better relaxation, less handling of tissues, and the value of an anesthetic which does not have the systemic effect of the commonly used general ones.

The treatment of the dehydration and the administration of chlorides is accomplished by giving at least 1 gram of sodium chloride per kilo of body weight as an initial dose in the severely toxic patients, with a fluid intake of not less than five liters in the first twenty-four hours. As high as a 5 per cent saline is given intravenously, up to 3 per cent under the skin and the necessary supplement by proctoclysis. Preoperative attention to saline and fluids is advisable, and imperative in certain cases.

Starvation is probably the simplest problem to meet and can be cared for by glucose when necessary, which is also of value in the control of vomiting. The usual choice is a 10 per cent solution for intravenous use. Man's ability to utilize glucose has been estimated at the rate of 0.8 to 0.9 grams per kilo of body weight per hour; he can use as high as a 25 per cent solution in the vein given slowly at the rate of 250 c.c. per hour as a maximum, 3 per cent under the skin, and 5 per cent by rectum.

For drainage of the obstructed gut the procedure of enterostomy[12, 13] and, as some recommend, duodenal lavage[14, 15] have been generally used.

Our knowledge of the lethal factors in acute intestinal obstruction seems to have reached its present status through a better understanding, though as yet incomplete, of the alteration in the chemistry of the tissues in this condition. The major share of attention has been given the matter of chloride depletion. This phase has been frequently written about during the last two or three years. Coleman,[16] addressing the Western Surgical Society last year, reported his own personal series. In the three years, from 1920 to 1922, inclusive, he had twenty cases with ten deaths; in the three years following, he had eighteen cases with two deaths. He stated that these two series were comparable as to type of obstruction, duration, seriousness, etc. In the second series he used saline and attributed the lowered mortality to this factor. Obviously, this series is too small to furnish any wide sweeping conclusions, but as others have offered comparatively similar results in small series of cases, I am led to believe that with adequate pre-operative and post-operative care along the lines mentioned above, other factors being equal, the mortality in acute intestinal obstruction as seen in private practice will more nearly equal that excellent mortality rate reported by Coleman in his second series of cases

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FIFTH MONTHLY CLINICAL CONFERENCE AT THE MINNEAPOLIS GENERAL HOSPITAL

Department of Obstetrics and Gynecology

May 29, 1928—10:30 A. M.

C. O. Maland, M.D. R. T. LaVake, M.D.
F. L. Adair, M.D. R. E. McDonald, M.D.

MINNEAPOLIS, MINNESOTA

By C. O. Maland, M.D.

1. *Carcinoma of cervix uteri:* Report of a case of squamous-cell carcinoma of the cervix uteri with treatment by radium.

E. B., aged 47, admitted April 9, 1928.

Present illness: Blood tinged watery discharge for past three months, vaginal hemorrhage one week prior to admission, moderate in amount which ceased within twenty-four hours. Followed by a few smaller hemorrhages in subsequent week. Weakness, loss of strength, slight loss of weight past three months. No pain.

C. T. A.—Onset at twelve years, regular, q. 30 days, duration three days, last normal period February, 1928. Menopause has not taken place.

Past history: negative. No operations.

Marital history: Two normal full-term pregnancies; one in 1899, one in 1900. Spontaneous miscarriage in 1912, three months gestation.

Family history: Negative.

General physical examination: Negative.

Pelvic: External genitalia negative. Cervix hard, firm, large, indurated, excavated, ulcerated, growth about 5 cm. in diameter. Bleeds easily. Corpus anteflexed, rather firm, hard, normal size. Adnexa and parametrium normal. Nodular induration of anterior vaginal wall.

Lab.—Urine, negative. Hgb., 42-67 per cent. R. B. C., 2,600,000-3,200,000. W. B. C., 9,100. Sedimentation time, 18 minutes. Temperature, 99°-100.° Pulse, 80-100.

Biopsy of cervix: Masses of irregularly growing squamous cell epithelium.

Diagnosis: squamous-cell carcinoma of cervix. Secondary anemia.

Treatment: General constitutional treatment of anemia with iron and liver anemia diet. 4/15 insertion of radium, 100 mgs. for twenty-four hours. 2,400 mg. hours of radium. 50 mg. in cervical canal. 2-25 mg. tubes against the vaginal portion of cervix. 2/25 insertion of radium, 75 mgs. for twenty-four hours. 1,800 mg. hours of radium. 50 mg. in cervical canal. 25 mg. against vaginal portion of cervix.

At time of second application the eroded, sloughing excavated necrotic area present at first application had healed over leaving a soft, friable, healed but reddened cervix. General condition at present time fairly good.

Carcinoma of the cervix is most common between the ages of 40-50. A history of vaginal discharge and hemorrhage is significant. Leucorrhea and abnormal bleeding at the time of menopause should be carefully checked by biopsy and diagnostic curettage. This patient had loss of strength and weight, fever, and anemia. These are late symptoms. Carcinoma of the cervix occurs more frequently than that of the corpus. Erosions and lacerations of the cervix should be treated.

The Boston Free Hospital for Women reports two cases of cervical carcinoma in 130 cases operated on for lacerations. Cervical malignancy of the squamous-cell type may form cauliflower masses on the portio, or it may assume an excavating type. It often invades the deeper portions of the cervix, leaving no external clinical signs until quite advanced. Corporeal cancer (adenocarcinoma) may remain as a local disease for some time. Regional lymph glands are involved later than in the case of cervical cancer.

Patients suffering from advanced malignant disease of the uterus are often markedly improved by application of radium.

By F. L. Adair, M.D.

2. *Carcinoma of cervix uteri:* Report of two cases of squamous cell carcinoma of the cervix, the one necessitating ligation of the uterine arteries to control hemorrhage, the other treated by radium and operation. General discussion of the treatment of carcinoma of the cervix.

A. H., aged 44, admitted May 14, 1928, as a return case with a history of vaginal bleeding, pain in back and inguinal regions, especially on right side over a period of 8 months.

Note: Previous admission, March 28, 1928. Discharged April 23, 1928.

Diagnosis: Carcinoma of cervix (squamous cell).

Operations: Biopsy of cervix, March 31, 1928. Insertion of radium April 14, 1928. 50 mg. placed in corpus. 50 mg. placed in cervix. Total 2,400 mgm. hours.

History and general physical negative on admission except for pain and bleeding.

P. H.—Negative. Leucorrhea for eight months.

F. H.—Negative. No history of carcinoma in family.

Pelvic examination May 16, 1928: Labia majora, minora, prepuce, and clitoris negative. Perineum 1° tear, competent. Cervix: large, with sharp, cartilaginous like margin and a deep excavation toward the cervical canal. There is a firm, bulging mass on anterior lip 2x2 cms. in size. The vaginal vault is negative, and there is no evidence of parametrial involvement.

Diagnosis: Squamous-cell carcinoma of cervix.

Operation April 19, 1928: Radical Wertheim operation. Corpus, tubes, ovaries, cervix, and parametrial and paracervical tissue removed. Portion of vaginal cuff removed. The vesico-vaginal septum and right parametrium were considerably involved. The right tube was dilated somewhat and there were numerous pelvic adhesions. In separating these the bladder was injured.

After the operation it was necessary to catheterize patient until 2 days ago.

Laboratory findings, et al: Biopsy of cervix, March 31, 1928.

Diagnosis: Squamous-cell carcinoma of cervix.

Urinalysis, May 15, 1928: Color, yellow; reaction. acid; spec. grav., 1,020; r.b.c., 0; albumin, V.F.T.; pus cells, 0-1.

Urinalysis, May 25, 1928: Color, yellow; reaction, acid; spec. grav., 1,025; r.b.c., 0; albumin, 3 plus; sugar, 0; pus cells, 0 at all times.

Blood, May 15, 1928: Hgb, 69; r.b.c., 3,750,000; leukocytes, 6,800. Diff.: p.m.n., 69; lymph, 23; mono., 7; eosin., 1: Basops. Wassermann negative. Sedimentation time, 19 minutes.

The patient had a rather slow but fairly uneventful convalescence, though there was considerable difficulty with urination.

The second case was that of P. H., aged 61, married, occupation H. W. Admitted April 13, 1928.

P. C.—Vaginal hemorrhage for about a week. Stated that she had felt entirely well until April 6, when, at about 4:00 A. M., she began to have a rather profuse vaginal hemorrhage. She bled intermittently during the week preceding admittance to the hospital, passing clots. For about a month preceding the onset of the profuse vaginal hemorrhage, patient had been "spotting." Did not have any attending symptoms, as pain or weakness. Did her housework and felt entirely well. No urinary symptoms. No discharge.

F. H.—Negative.

C. T. A.—Menses established at 16, regular, 28-day type. Usually lasted 4-5 days. No. dysmenorrhea. Menopause at 43 years. No bleeding until onset of present illness.

Physical: Positive findings. Teeth carious.

Pelvic: Labia majora slightly edematous. Vaginal discharge from cervix; sanguinopurulent, rather strong odor. Cervix excavated, indurated, reddened, eroded. Marked deep excavation in left vaginal vault from which bleeding comes. Bleeds easily, some secondary infection. Infiltration present in vesico-vaginal septum. Adnexa not easily palpated. Corpus uteri not definitely outlined. Abdomen spastic and rigid on bimanual examination. Blood pressure 134/84.

Laboratory: Hgb. 58 per cent, April 14.

Course: April 14, patient began bleeding profusely. Vaginal packing inserted. Systolic pressure down to 120. Bleeding not well controlled. April 16, patient taken to surgery. Abdominal midline incision. Uterus normal in size, shape, and consistency with no intrapelvic metastases present. No large glands palpable in abdomen. Uterine arteries of both sides were dissected out and ligated.

Practically no hemorrhage until April 19, when profuse bleeding recurred. Packs did not control it. Pulse weaker. April 19, patient taken to surgery. Put in lithotomy position, general anesthesia used. The bleeding area about the eroded carcinomatous surface was cauterized with electric cautery. There was a spurting vessel on the left side. The vaginal cuff in the region about the cervix was sutured with chromic catgut. Hemostasis was secured and bleeding controlled.

April 20, hemoglobin, 35 per cent; R. B. C., 1,880,000. Patient weak. Pulse weaker, blood pressure 100/68. Transfusion deemed advisable, if suitable donor could be found.

Bleeding apparently controlled following second procedure. May 1, hemoglobin, 50 per cent, R. B. C., 2,660,000. Given 500 c.c. citrated blood May 3. Had chills and febrile reaction. Normal convalescence, with practically no bleeding. Hemoglobin, 75 per cent; R. B. C., 3,880,000 on May 16. On May 29 a radium application of 100 mgm. for 30 hours was given. She had some pain following this but improved gradually. On July 2 her hemoglobin was 92 per cent and the R. B. C. 4,670,000. She was discharged from the Minneapolis General Hospital on July 10 in good condition. Since her discharge she has continued to improve.

You have had for discussion two cases of squamous-cell carcinoma of the cervix uteri. Each of these cases presented a different problem. The first case, A. H., came in with a type 2 carcinoma of the uterine cervix. She was given treatment with radium for 24 hours and about one month later was subjected to a hysterectomy. There has been much discussion as to whether or not the main reliance should be placed upon radium or surgical interference in cases of cervical carcinoma. The present trend of opinion is toward the use of radium to the exclusion of operation. Statistics indicate that a larger percentage of cases of carcinoma of the cervix treated with radium have a five year cure, than is true of the cases treated by operation alone. There is no argument about the cases which have passed the reasonable limit of operability. These cases should be treated exclusively by radium. The question is directed therefore toward cases in type 1 and possibly type 2 as to whether the patient should be treated by radium or operation. Statistics may be quoted for radium or for operation, but there are practically no statistics for radium and operation. My personal feeling is that cases within the limits of operability should be treated by both radium and operation. We have followed this course of procedure in a number of instances with satisfactory results. The cases have been pre-radiated for 24 hours using anywhere from 2400 to3000 mgm. hours of radium. At the end of twenty-four hours the radium has been removed, the vaginal tract has been sterilized and an abdominal panhysterectomy has been done. Our mortality from this procedure has been negligible and the ultimate results have been favorable. Our series of cases is most too small to permit of drawing absolute conclusions. The lapse of time has been insufficient in some of them to make any statement regarding the percentage of permanent cures.

The second case presented a problem of different character. She came in practically exsanguinated from profuse vaginal hemorrhage. The extent of the growth was moderate but it involved the left vaginal fornix and destroyed a small portion of the cervix. The hemorrhage was controlled temporarily by packing, but recurred. Cauterization did not give satisfactory results. In view of the serious condition of the patient and the difficulty of controlling the hemorrhage, she was subjected 3 days after admission to the hospital to a laparotomy and ligation of the uterine arteries. This procedure controlled the bleeding for several days but 3 days later she had a recurrence of the profuse bleeding. Attempts to control the bleeding locally with a cautery were unsuccessful. We were unable to ligate the high lying vessel on account of the friability of the tissue and its inaccessibility. We finally resorted to the procedure of placing a purse string suture in the vaginal vault which was tightly ligated below the artery. This effectively and permanently controlled the vaginal hemorrhage. The patient was subsequently given radium treatment to the exent of 3,000 mgm. hours. This patient was not subjected to a hysterectomy because of the infiltration of the growth into the left vaginal vault and parametrium, belonging in Type 3.

While both of these cases are still living and will be followed in our Out-patient Department, the outlook for their permanent cure is unfavorable. Their condition is, however, considerably better than it was upon entrance to the hospital. There is little doubt that the life of one will be prolonged, and there is no question that in the second case death would have occurred within a very short time, had not the measure to control the hemorrhage been taken. Just how long her life may be prolonged, it is difficult to say.

In treating cases of carcinoma of the uterus, one has to adopt different procedures to meet the demands of the individual case. We have to rely principally upon the use of the cautery, radium, surgery, and deep *x*-ray therapy. We are in the position of having no specific treatment for cancer and none which gives satisfactory results in the majority of cases. Our present situation is that of being able to offer some hope for the permanent cure to the early cases with definite prolongation of life. In the more advanced cases, our treatment is mainly that of controlling symptoms, palliation and prolongation of life, but little or no hope of permanent cure.

By R. T. LaVake, M.D.

3. *Eclampsia:* Report of a case of acute fulminating eclampsia in a primigravida, age 18, who was delivered of a living baby by version.

L. M., aged 18, Para 1. Grav. 1.

Admitted May 22, 1928, at 9:45 A. M., unconscious. Unable to give history, but mother says the girl had continued to work at a laundry up to the day before admission. Mother did not know the girl was pregnant, but noticed puffiness of the latter's face for past three weeks. No prenatal care. Patient had slept with her sister the night before admission to the hospital, and her sister said the girl was very restless all night. About 7:00 A. M., May

22, 1928, had a convulsion followed by another in 15 minutes and another a half hour later. Doctor called and patient sent into hospital. Seen on admission, patient was extremely restless, throwing herself about in bed so that restraints were necessary. Had two major convulsions, holding breath and becoming very cyanotic. Numerous lesser convulsions. L. M. P. could not be determined. Patient seemed from physical examination to be nearly at term.

Physical examinations (positive findings):

1. Restless. Convulsions.
2. Edema of face, moderate.
3. Edema of lower extremities, moderate.
4. Teeth and gums, oral infection (proved to be Vincent's Angina).
5. Lungs negative. No edema or râles.
6. Heart-tachycardia but no murmurs. B. P. 190/112 (approximate).
7. Pupils dilated.
8. Rectal examination: cervix 75 per cent effaced, 3-4 cm. dilated.

Sagittal suture tranverse: station of head at spines.

Procedure followed:

1. Gastric lavage could not be done due to extreme irritability and restlessness of patient.
2. Colonic flush: impossible due to low position of fetal head.
3. Morphine, gr. ¼ (H) given immediately and repeated in one hour.
4. Chloral hydrate gr. xl per rectum.
5. Intravenous mag. sulph. 20 c.c. of 10 per cent sol.
6. Veratrum viride mx (H): B. P. dropped to 160/110 15 min. later.
7. Catheterized urine specimen examined: boiled solid.
8. Vaginal examination at 11:30 A. M.: Cervix 4-5 cm. dilated.

Manually dilated and version and extraction performed. Baby in poor condition but living.

Course in Hospital:

1. Now six days post partum.
2. No further convulsions.
3. Sleeps considerably and is feeling well now. Is always fairly alert and perfectly rational.
4. Edema has about disappeared.
5. On liquid diet 5 days. Now on light carbohydrate diet.
6. Intravenous 10 per cent glucose, 250 c.c. on third day.
7. B. P. range (a) dropped from 190/100 at time of delivery to 100/74 immediately after delivery. (b) secondary rise (2nd day) to 150/114, gradually dropping until at present it is 100/70.
8. Subsequent urine exam. 3rd day: also boiled solid.

Laboratory: Urine—sp. gr., 1,009; color, yellow; reaction, acid; albumin, boiled solid; micro casts, hyaline, granular, waxy; R. B. C., 100-200; mouth smear, pos. Vincent's; blood chem., uric ac., 6.9; cholesterol, 225.0 mgs.; urea N., 43.6 mgs.

This is a very interesting case because it illustrates so many features in the treatment of eclampsia that many of us consider very important. One first has to decide whether delivery should be consummated or whether she should be carried along on the Stroganoff treatment. Personally I believe in the Stroganoff treatment as an adjuvant. The main consideration is delivering the patient as soon as possible and yet in a manner that will not do violence to the soft parts of the mother. In this case bags were prepared so that they could be introduced if the cervix were found to be hard and nowhere was incomplete dilatation. Upon vaginal examination the cervix was found to be potentially dilatable and the dilatation was completed with ease manually. Because head was at spines in the transverse position, a version was considered the operation of choice for delivery. If this case had been allowed to go on without interference we would likely have lost the baby and possibly the mother.

In cases in which the uric acid is 4 or over the prognosis is bad unless delivered fairly rapidly. Many of us believe that whatever the toxin causing pre-eclamptic toxemias, it is resident in the placenta or the child and delivery is the first consideration.

This case illustrates another point: whether or not to bleed before delivery. If one bleeds, the drop in pressure may be too great following delivery, and subsequent recovery after bleeding is not so rapid. Most of these cases of toxemia are suffering from an anemia and the bleeding increases it.

This case illustrates the frequency with which one finds infection, here oral, associated with the toxemia of pregnancy. Meticulous attention to cleaning up all focal infection, many of us believe to be a great factor in preventing the toxemia of pregnancy.

By R. E. McDonald, M.D.

4. *Generally contracted pelvis:* Report of a case having a generally contracted pelvis, tertiary syphilis and congenital ichthyosis. Delivered of macerated stillborn child by craniotomy and forceps.

Generally contracted pelvis offers one of our most positive indications for Cesarean section in the pregnant woman at term, especially if she is carrying a baby of average size or better and when complications, such as unfavorable positions of the baby, are present. The following case is reported of an unmarried mother:

I. A., aged 26, who came in labor to the obstetrical service of the M. G. H. with practically no prenatal care. The calculated date of confinement was December 31, 1927, since the onset of the last menstrual period was stated to have occurred March 25, 1927. The patient was admitted and first seen in labor January 3, 1928. Pains began at 2 A. M. on the date of admission. There had been no previous pregnancies and the past and family histories were essentially negative except for the commoner diseases of childhood.

The antenatal period, from the subjective standpoint of the patient, had been entirely normal and she had continued to work as a domestic up to only a couple of weeks before the expected date of confinement. From that time until the onset of labor the patient lived at a home for unmarried mothers where general supervision was the only prenatal care given.

The patient appeared as a woman of normal stature. The heart and lungs were normal, and the thyroid gland was slightly but diffusely enlarged. Blood pressure was 128/78 when first examined. The abdomen was ovoid with the fundus of the uterus palpable two finger breadths below the xiphoid process and the head fixed at the pelvic inlet but not definitely engaged. Palpation showed the breech to lie in the fundus, the back to the left and apparently posterior and the extremities high on the right side. The external pelvic measurements were found to be I. S., 23.0; I. C., 27.0; I. T., 29.0; external conjugate, 18.5 and bisischial, 7.0 cm. The patient had now been in hard labor for six and one-half hours with no demonstrable progress. It was decided to allow her to continue with a longer trial of labor and to give her rest with opiates as needed. The pelvis was moderately contracted and flattened anteroposteriorly and was considered to be of a mildly rachitic type. However, at this time it seemed that delivery in the natural way was possible if the head descended and rotated. The fetal heart tones, which were reported as absent during the patient's last day at the Maternity Home, were heard low in the left flank. They were strong and the rate was 148. On rectal examination the cervix was found to be undilated and the head was ballotable. Labor continued with pains coming very hard at five minute intervals for twelve hours with the exception of a period of one and one-half hours of rest obtained by the administration of morphia. Twelve hours after the onset of labor the cervix had attained a dilatation of two centimeters. The head had not descended, and the membranes were still intact. Two hours later the membranes ruptured. An *x*-ray was taken about twenty-four hours after the patient came to the hospital. This confirmed the diagnosis of O. L. P. position and added to it "moderate extension of the head with overriding of the fetal skull bones"—(*x*-ray plates demonstrated).

The patient, aided at intervals by narcosis, remained in exceptionally good condition, as did the baby. She had clearly demonstrated that it was impossible for her to deliver the child so that Cesarean section was decided upon and performed sixty-one hours after labor began.

In the presence of a cervix dilated two to three centimeters, the membranes ruptured and a leucocyte count of 11,500, the low cervical extraperitoneal type of operation was done. A live normal female infant was delivered. The head was fixed in the extended attitude, closely approximating a brow presentation, in the pelvic inlet.

Convalescence of the mother was normal with the exception of a slight superficial wound infection. That of the baby, however, was less favorable. On the second day the infant developed an acute pharyngitis, followed by a suppurative cellulitis of the neck, general pyemia and death on the fifteenth day.

Three weeks post-partum the patient was given a final examination when it was discovered that the pelvic inlet was considerably narrowed by a very acutely angulated lumbosacral promontory. This, together with the general contraction of the pelvis, prevented the descent and flexion and rotation of the fetal head.

BOOK NOTICES

INTERNATIONAL CLINICS. Edited by Henry W. Cattell, A.M., M.D. Volume IV. Thirty-seventh Series, 1927. Philadelphia and London: J. B. Lippincott Company, 1927.

These books are always interesting. The articles are short and to the point. Most of them are from two to ten pages long. Many case reports are used to demonstrate the point in question, and this makes the articles easy to read. The subject matter covers nearly every field and presents the newer things. This is a good book for the man who has a few minutes each day to have on his desk.

—A. N. BESSESEN, M.D.

THE DUODENUM. MEDICAL, RADIOLOGICAL AND SURGICAL STUDIES. By Pierre Duval, Jean Charles Roux and Henri Beclere of the Surgical Clinic, Faculty of Medicine, Paris. Translated by E. P. Quain, M.D., St. Louis. The C. V. Mosby Company. 1928. Price $5.00.

This small book should serve the purpose of calling the attention of American medical men much more directly to this rather neglected part of the anatomy. The stomach, the colon, the rectum, and the gall-bladder have long been the subject of much attention, but aside from the condition of duodenal ulcer, little attention has been paid to the diseases of the duodenum. There has been much research done on this portion of the bowel, a very considerable part by American workers, but so far the profession has not given it the consideration it deserves. According to the introduction "This book is written by a physician, a surgeon, and a radiologist, and it has required the assistance of a chemist."

Undoubtedly that is the proper combination for the study and treatment of diseases of the duodenum. However, even such teamwork is useless unless all the members are alive to the occurrence of duo-

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THE
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ORTHODONTIA—WHAT IT IS

The wide misconception of the meaning and of the work and possibilities of orthodontia, led the editor of THE JOURNAL-LANCET to ask for an authoritative statement on the subject, and he knows of no one better qualified to furnish this information than Dr. Thomas P. Ryan, of Minneapolis, the secretary of the Minneapolis District Dental Society, with offices in the P. & S. Building, near the editorial offices of THE JOURNAL-LANCET.

Dr. Ryan is not merely an overenthusiast in bone adjustments, but he is a student of both medicine and dentistry with a knowledge of the fundamentals of each science. We gladly give his answer to our enquiry a prominent place in our columns. He writes as follows:

ORTHODONTIA

Responding to your wishes, I approach the subject of orthodontia as an important health adjunct in its relation to medical and dental practice, to be utilized as a valuable unit of these professions in the stimulation of public health and comfort.

Doctor James David McCoy, of the University of Southern California, states: "Orthodontia is a study of growth and development; it seeks to determine the factors which aid in bringing about the normal development of the dental arches and functional perfection of the teeth and their correlated parts, and aims to learn the influences necessary to maintain these conditions when once they have been established."

It is interesting to note the rapid advancement and approach at standardization of the practice of this specialty during the past quarter century.

Originally orthodontia was regarded as a mechanical means of "straightening" so-called "crooked teeth."

The esthetic results of orthodontic treatment are still regarded as very important, but more significant are the increased attributes of health to be obtained; increased development of the dental arches providing for better tooth alignment; better masticatory apparatus; correction of traumatic occlusion; relief of cases of prognathism; better breathing apparatus; increased tone of the oral region; and, lastly, more beautiful facial expression.

Doctor Federspiel, an oral surgeon of Milwaukee, who previously practiced orthodontia, uses this technic very successfully as an ally in plastic surgery.

Orthodontia has, therefore, advanced from a mechanical art to a highly dignified specialty requiring careful delicate technic and keen diagnostic judgment. It has become one of the best recognized divisions of the Associated Groups of the American Dental Association.

Some men argue that this specialty should continue to be a department of dentistry, others that it should be a branch of medicine, just as they argue that dentistry itself should be a specialty of the parent medical profession, despite the numerous specialties within dentistry; and there are the extreme views that orthodontia is big enough to stand on its own legs as an independent profession.

Regardless of these various opinions, the fact remains that orthodontia has rapidly assumed a commanding place as a means of health service, to give to the public greater happiness and enjoyment of life by relieving many of the unfortunate conditions with which nature has endowed us.

Preparation for this work has usually in the past been confined to a few proprietary schools. Our universities are now becoming more interested in its development. The University of Minnesota has during the past two years conducted a course in this work intended originally for the general practitioner. A third year will be available to those interested; and several men, principally from St. Paul and Minneapolis, and one from Faribault, have made weekly trips to the campus during this time for instruction, observation, and clinical training.

The best orthodontists from the University and the Twin Cities have been available to our staff, as well as a splendidly interested group from the Medical School. Dr. Scammon and others from the College of Medicine have given excellent lectures governing growth and development.

The editor of THE JOURNAL-LANCET noted an interest on the part of medical men regarding this form of treatment and it is evident that there is a countrywide awakening of the dental profession toward the recognition of deformities, necessitating this type of treatment.

During the Convention of the American Dental Association, the Section of which the writer had local charge, heard two splendid medical papers by Dr. Frederick Schultz and Dr. Frederick Adair. Dr. Schultz particularly appealed to the dental profession to make orthodontic service available to greater numbers of people.

Orthodontia is becoming a more favorable adjunct of hospital treatment in the correction of oral malformations. It was recently recommended in an eastern dental journal as a favorable means of assistance to the orthopedic surgeon, however far-fetched this may be.

There are men who believe that every form of reconstruction work in dentistry necessitates some type of orthodontic application, which brings up the point of adult orthodontia, a subject of interest among some of our specialists. The variation in response to treatment by different individuals requires caution in its use. Over-enthusiasm may lead to pronounced difficulties.

It is to-day regarded as a means of assisting growth, which is a physiologic process rather than a mechanical means or engineering factor developed only for the movement of teeth. The mechanical, technical requirements, however, are very necessary to obtain and sustain results.

Orthodontia as a specialty requires definite technical skill, with a background of diagnostic judgment, and a temperament suited to the task, and should not be practiced promiscuously, inasmuch as its application is confined largely to young people.

We feel, therefore, with the pronounced interest now being manifested by our dentists, and the honored recognition accorded it by our medical confréres, this branch of the healing art will in the future attain a position of solidarity as a great contributing factor toward the relief of larger numbers, increasing its degree of service for the health, comfort, and esthetic requirements of humanity in general.

"LIFE IN THE RAW"

An article in the November number of the *North American Review* that arrests one's attention is entitled as above and it is quite inclined to be plain. The first sentence opens with "Life in the raw is what many women of to-day demand—on paper and on the boards." It is not uncommon for many young women of the present day to think or to see "life in the raw." And the article continues: "One of that type effervesced during a current successful play; she received its melange of adultery and brutality with irrepressible delight. 'It's life in the raw!' she chirruped ecstatically to her companion. Large numbers of eminently respectable women to-day enjoy and pay for theater situations both raw and tainted."

This is probably a fair example of what is occurring in the world to-day, not only in New York or Chicago, but in San Francisco. The women, as well as the men, exclaim: "We know what we want," and they get it at the Night Clubs and similar places in the cities. We are not free from this sort of thing in the Twin Cities, and if one chooses to dig into the dirt there are plenty of opportunities—but of what value is it?

This taste for "life in the raw" is even recorded of a grand-mother who left New York in 1833 for a settlement in Michigan where life was simple yet exciting. "The men were needed for work in the field, so grand-mother, then a young married woman, sprang into a wagon and started toward Pontiac, the nearest source of supplies—a long journey over almost impassable roads. She left her three children at home to shift for themselves, one a baby of two years. On the third day, back came grand-mother, the rattling wagon laden with provisions for the entire settlement, including a supply of dried apples, choicest of pioneer rations."

"One day while grand-mother was in the field helping the men, Indians stole her sleeping baby from the cradle. But the theft was a prank rather than a serious kidnapping, for my grand-parents and the Indians were on friendly terms. In a short time the redskins brought the baby back. The reinstated baby grew up to be my mother."

This was "life in the raw,"—indifference, carelessness, taking your chance, and not considering the safety or the comfort of others. The immature, restless girl is only too anxious to bite into the wormy fruit of the moderns, but chiefly among these seekers after excitement are the unoccupied women, bereft of home duties and seeking to fill their minds with "raw life," and "bursting with ardor to impart impressions in eager tête-á-tête."

Even the older people, the dowagers or those who are supposed to represent what is highest in the better form of living, will do almost anything for a little excitement, a little experience, and just to say that they have done these things. These people, the author asserts, "seek the excitement which the drabness of their minds denies them by a pursuit of life in the raw at intellectually decadent or sensationally vulgar shows. In speaking of shows, how many of us know what has been going on in the larger cities, where plays are undisturbed? We had a little experience in Minneapolis, where Mayor Leach has ordered the closing of the Gayety Theater because it pleased the people to attend it even though it was a little "tough, rough, and low." But the Gayety Theater will open again. Everyone expects it to. The Councilmen have a very tender heart and they will let this smudge go on after a while, as soon as the present excitement has died out. The expectation is that this playhouse will have better things to show, but will they be better?

It is the same with books. If you ask the excitement-seeker for a suggestion on books you will probably be told to "ask your librarian for *The Sooty Question*—there isn't a moral line in it; every character is bad in every conceivable way. All the husbands and wives are deceiving one another, and the young girls and men are even worse. You *must* read it."

We who have lived in this period, or during the past two decades, have learned much of life in the raw, but what are we going to do about it? Will our churches settle the matter? Will the people suddenly wake up to the fact that they are living a life of excitement without bettering their views or improving their minds? It is very much like the school question. We are educating our children up to what we think is a high point of efficiency, but we do not teach them how to think.

Of course, all this may be a fad, this way of living and of thinking, and (maybe) we shall come back to our normal, natural and so-called Victorian ideas.

(Books concluded from page 574)

denal pathology and its manifestations. The purpose of the book is to show the frequency, the importance, and the seriousness of the diseases of the duodenum; and this it does in a clear and adequate way. Not every one will agree with the conclusions drawn and in places the symptoms given are rather vague. However, no one can read it without gaining a new realization of the importance of the duodenum.

It is beautifully printed and illustrated, and is a real pleasure to handle.

—H. B. Sweetser, Jr., M.D.

Physical Diagnosis. By W. D. Rose, M.D., Associate Professor of Clinical Medicine in the University of Arkansas, Little Rock. Fifth edition, 310 illustrations and 3 color plates. Cloth, 819 pp., $10.00. The C. V. Mosby Co., St. Louis, Mo., 1927.

This work sufficiently attains the purposes for which it was written. This statement is confirmed by the fact that five editions have appeared in the last eleven years. The whole subject of physical diagnosis is well covered, and if any criticism is to be offered, it is that the author has gone into the subject at greater length than is necessary. Some of the subject matter could be curtailed.

A few specific criticisms may be offered to improve succeeding editions.

Dyspnea and cyanosis are discussed as closely interrelated conditions. The reviewer does not consider them as such. Dyspnea can be present in marked degree without corresponding cyanosis or anoxemia. Cyanosis can occur without dyspnea when the pulmonary veins are delivering unaërated blood into the left auricle from only a portion of total lung tissue. Dyspnea and cyanosis are due to independent causes, and these should be more clearly defined than they are.

More of the newer physiology of the respiration, according to the views of Hoover and Peabody, could be incorporated in the chapters on the diagnosis of pulmonary conditions, especially since the author undertakes to discuss physiology and pathology, as well as physical diagnosis.

The discussion of diaphragmatic pleurisy is incomplete and not up to date.

Among the notable omissions which may be mentioned are the diagnosis of such important conditions as postoperative pulmonary collapse and coronary occlusion (cardiac infarction). The appearance of the tongue in various diseases is described, but the glossitis of primary anemia is omitted.

In enumerating the causes of arteriosclerosis, the author starts out by mentioning alcoholism and syphilis. In the light of modern knowledge these should be deleted in future editions.

The chapter entitled "The Diagnosis of Abnormalities of the Heart Beat," by Drew Luten, is very well written.

—H. O. Altnow, M.D.

The Opium Problem. By Charles E. Terry, M.D., and Mildred Pellens, for The Committee on Drug Addictions in collaboration with The Bureau of Social Hygiene, Inc., Pp. 1,042. Printed by The Haddon Craftsmen, Camden, N. J., 1928.

This work concerns itself with chronic opium intoxication. The committee directing its publication decided it could accomplish its purpose if they could determine the extent of the chronic use of opium and its derivatives and the cause of the factors involved. The etiology and nature of chronic opium intoxication and how it should be treated; and, finally, the method of solving the chronic opium intoxication problem.

The material is compiled in thirteen chapters. In addition to the review of the medical literature and the information obtained by presenting questionnaires to medical heads of institutions, neurologists, and psychiatrists, members of special medical societies and state health officers, there is a review of the lay work, reports of investigations, individual studies, and findings of official commissions. The problem has been approached from the viewpoint of the sociologist and the legal relationships are included in the scope of the work. It is interesting to note that the bibliography of the subject compiled for the committee members comprises more than six thousand items.

Evidently, the compilers were greatly impressed by the complexity of the problems before them. It was most difficult to arrive at a satisfactory figure that would express the quantity of opium consumed and the number of people consuming it. Based on the reports obtained from thirty per cent of physicians replying to the questionnaires, it is estimated that there are 237,655 addicts in the United States, slightly less than one-quarter of one per cent of our total population. In 1926, 144,011 pounds of opium were imported for consumption into our country. The authors emphasize, however, that we have no exact figures to-day regarding the extent of the use of opium.

It is quite apparent that exact explanation of the nature or mechanism of chronic opium intoxication can so far not be satisfactorily stated. There follows therefrom that a basis of sound method of control is still lacking. Attention is called to the necessity for a continued search for further information to improve methods of investigation. It is considered best to advocate the most elastic administrative measures possible, in other words an adjustable policy. The greatest benefit from the various international deliberations will be, it is thought, the achievement of having focused international attention on this problem.

Since the World War there has been an accumulation of more exacting research information in our own country as well as in Germany, France, and England. It is interesting to note that the New York Psychiatric Society (Public Health Committee, New York Academy of Medicine) recommended first of all that the manufacture of heroin be abolished. They called attention to the fact that in New York City and in the East there is no prevalence of any drug habit, aside from opium and its derivatives. Some means of unsensational education of young men and women as to the danger of habit forming drugs is urged. The local community, rather than the state itself, is best fitted to conduct the treatment of drug addiction, though the state should do what it can by preventing the development of new cases. Psychopathic hospitals and pavilions and special provisions in general hospitals throughout the state are recommended.

For one interested in the opium problem, this work furnishes a ready reference for material that would otherwise have to be sought for with considerable effort.

—Joseph C. Michael, M.D.

Collected Papers of the Mayo Clinic and the Mayo Foundation for 1927. Vol 19. Edited by Mrs. M. H. Mellish and H. Burton Logie, M.D. Octavo volume of 1,330 pages with 412 illustrations. Philadelphia and London: W. B. Saunders Company, 1928. Cloth, $13.00 net.

This volume is so well known and of such marked excellence that any discussion of its contents is not necessary. The papers, as usual, are those which have been presented by members of the Mayo Staff during the current year. Some of the papers are abridged while others are printed in their entirety.

The volume has been divided, as usual, into various sections and the sections themselves seem quite complete in their discussion of the various interesting phases of their subjects. The material in the volume this year has been very well selected and is useful for every branch of medicine.

New methods of diagnosis and treatment are clearly presented and also evaluated. This book is a ready reference for everyone and is a worthy contribution to the medical literature of to-day.

—A. E. Cardle, M.D.

MISCELLLANY

DR. C. LEVADITI

The Twin Cities and Northwest were privileged to have the pleasure of a visit by Doctor C. Levaditi of the Pasteur Institute, Paris, France, eminent scientist and known throughout the entire medical world for his many noted researches and discoveries in medicine.

Doctor Levaditi came to the United States on a scientific mission, visiting the Mayo foundation at Rochester where he did some work in collaboration with Doctor Edward C. Rosenow of the Mayo Foundation. He also delivered lectures at Harvard University, University of Michigan, and a few other leading medical centers, including a visit to the University of Minnesota bacteriological laboratories.

He remained in Minneapolis a few days as guest of Mr. George G. Ulmer of the Physicians & Hospitals Supply Company.

Doctor C. Levaditi is internationally known for his many researches, and particularly his development of a new bismuth cure for syphilis. He was the first to use bismuth compounds in oil suspension for the successful cure of this disease. The extent and completeness of his work is evidenced in the works published by himself and edited by Masson & Company, of Paris, France, under the heading "Bismuth in the Treatment of Syphilis." Since the publication of these works, Dr. Levaditi has developed a new and improved bismuth compound which is claimed by many authorities to be more efficient than present known remedies in a great many cases. This product has been effectively demonstrated to cure syphilis in all its stages, and properly used has no toxic effect.

Among some of his other works are the determination of the filtrable virus of infantile paralysis, the staining of syphilitic spirochetes on slides, researches on lethargic encephalitis.

His latest honor in the medical world was the recent award of the Cameron prize.

Among the many scientific bodies of which he is a member is the Academy of Medicine.

Dr. Levaditi was greatly impressed by the research work being carried on at the University of Minnesota, and the Mayo Foundation. He was exceedingly impressed with the extensive development of the Northwest in both scientific and business activities and enjoyed the beautiful scenery and the kind hospitality evidenced everywhere.

NEWS ITEMS

The Golden Valley Hospital of Beach, N. D., has reopened.

Dr. O. G. Bean has moved from Walcott, N. D., to Willow City, N. D.

Dr. C. Eugene Riggs, of St. Paul, has gone to Florida to spend the winter.

Dr. Arnold Larson, of Fertile, Minn., is in Philadelphia doing postgraduate work.

The University of Minnesota hopes yet to receive a gift of $1,000,000 from the Rockefeller Foundation.

Dr. John A. Moga, of St. Paul, and Miss Catherine A. Toomey, also of St. Paul, were married last month.

Dr. F. P. Strathern, of St. Peter, Minn., was elected president of the Minnesota State Sanitary Board last month.

Dr. O. O. Benson has moved from Floodwood, Minn., to Soudan, Minn., where he will have charge of the Oliver Hospital.

It is now believed that the deaths from typhoid fever in Minnesota in 1928 will show the lowest number per year in the history of the state.

Dr. H. F. Bright has moved from Mitchell, S. D., to Elk Point, S. D. Dr. Bright served on the South Dakota State Board of Medical Examiners for several years.

The Aberdeen District Medical Society of South Dakota met in Aberdeen last month when papers were read by Dr. W. H. Condit, of Minneapolis, Dr. C. G. Lundquist, of Leola, S. D., Dr. G. R. Albertson, Dean of the Medical School of South Dakota, and Dr. J. C. Ohlmacher, of the State Health Laboratory.

The Ramsey County Medical Society, at its November meeting, unanimously recommended to the Governor of the State the re-appointment of Dr. A. E. Comstock as Secretary of the State Board of Examiners.

Dr. J. L. Haskins, after practicing at Northfield, Minn., for six years, has gone to King's Park, N. Y., to join the staff of the State Hospital. He is succeeded in Northfield by Dr. Wall, of the Miller Clinic, St. Paul.

Drs. C. P. and E. J. Nelson, of Owatonna, Minn., have recently purchased a commodious residence in that city, and are converting it into quarters for a private hospital, which will be ready for occupancy in about two months.

The following officers were elected by the staff of the Asbury Hospital, Minneapolis, last month for 1929: President, Dr. A. F. Bratrud (reelected); vice-president, Dr. H. M. Lee; secretary and treasurer, Dr. H. O. McPheeters.

The Pottenger Sanatorium of Monrovia, California, celebrated, on December 5, the twenty-fifth anniversary of its opening. Ex-patients and many friends of the institution were invited to attend a reception given by the Sanatorium to celebrate the event. The institution is to be congratulated on the work it is doing in a great cause.

Dr. Edgar R. Barton, of Minneapolis, died on December 7, at the age of 56. Dr. Barton was a graduate of the College of Physicians and Surgeons, Minneapolis, class of '01, and began practice at Frazee, Minn., and came to Minneapolis in 1919, where he entered into partnership with Dr. W. B. Roberts with whom he remained four years until his health failed. Further notice of Dr. Barton's work will appear in our next issue.

Britton, South Dakota, is rejoicing over the completion of its handsome new hospital now ready for occupancy. It is a fireproof building, thoroughly equipped for hospital purposes. The first floor will be used for business and the second and third floors for hospital purposes with a capacity of thirty beds. It is to be conducted by D. B. Rice, formerly assistant superintendent of the Ancker Hospital, of St. Paul. Dr. C. M. Davidson, also of the Ancker Hospital, is associated with Dr. Rice.

Dr. Martin P. Rindlaub, Jr., Fargo, N. D., died on December 2 at the age of 54. Dr. Rindlaub was a graduate of Johns Hopkins, class of '05, and then studied abroad, specializing in ophthalmology and otolaryngology, and became a member of the firm of Drs. Rindlaub, Rindlaub, and Rindlaub, later the Rindlaub Clinic. Dr. P. Rindlaub became widely known to the medical profession of the Northwest and held membership in numerous medical societies, in and outside of North Dakota.

The Sioux Valley Medical Association will hold its mid-winter meeting in Sioux City, Iowa, on January 22 and 23. An extensive program of clinics and papers will be presented. Dr. John H. Henkin, of Sioux City, is secretary of the Association, and full information covering this meeting can be obtained from him. The other officers of the Association are the following: President, Dr. C. P. Dolan, Worthington, Minn.; vice-presidents, Dr. C. O. Wright, Luverne, Minn., and Dr. Goldie Zimmerman, Sioux Falls, S. D.; treasurer, Dr. W. R. Bruck, Sheldon, Iowa. The new member of the board of censors is Dr. H. R. Hammer, Canton, S. D.

The Sixth District Medical Society of North Dakota

The Sixth District Medical Society of North Dakota held its last meeting of 1928 in Bismarck, December 5, 1928. The meeting convened at the G. P. Hotel, where dinner was served at 7 P. M. to 34 members and 8 visitors.

Immediately following the dinner the scientific program was taken up. The first subject was by Dr. Geo. M. Constans on "Cavernous Sinus Thrombosis," with report of cases.

Dr. John Doyle, of Rochester, Minnesota, was introduced and spoke on the subject of "Pain as a Symptom in Neurological Cases." Discussion by Dr. Brandes, of Bismarck.

Dr. E. P. Quain presented the subject of "Infections of the Hand," briefly reviewing the anatomy and presenting a film illustrating the anatomy, modes of infection, and treatment.

The regular business meeting was then taken up. The applications of Dr. P. J. Weyrens, of Hebron, and Dr. F. W. Buckingham, of Bismarck, for membership, received their second reading, and they were voted upon and both were unanimously elected to membership. The applications of membership of Dr. Leonard H. Fredericks and Dr. J. D. Jungman, of Bismarck, received their first reading and were handed to the Board of Censors.

The following officers were elected for the ensuing year: President, Dr. B. S. Nickerson, Mandan; vice-president, Dr. C. W. Schoregge, Bismarck; secretary-treasurer, Dr. W. L. Diven, Bismarck; censor, Dr. A. M. Fisher, Bismarck; delegates to the State Medical Association, Drs. C. E. Stackhouse, H. A. Brandes, Bismarck.

W. L. Diven,
Secretary Sixth District

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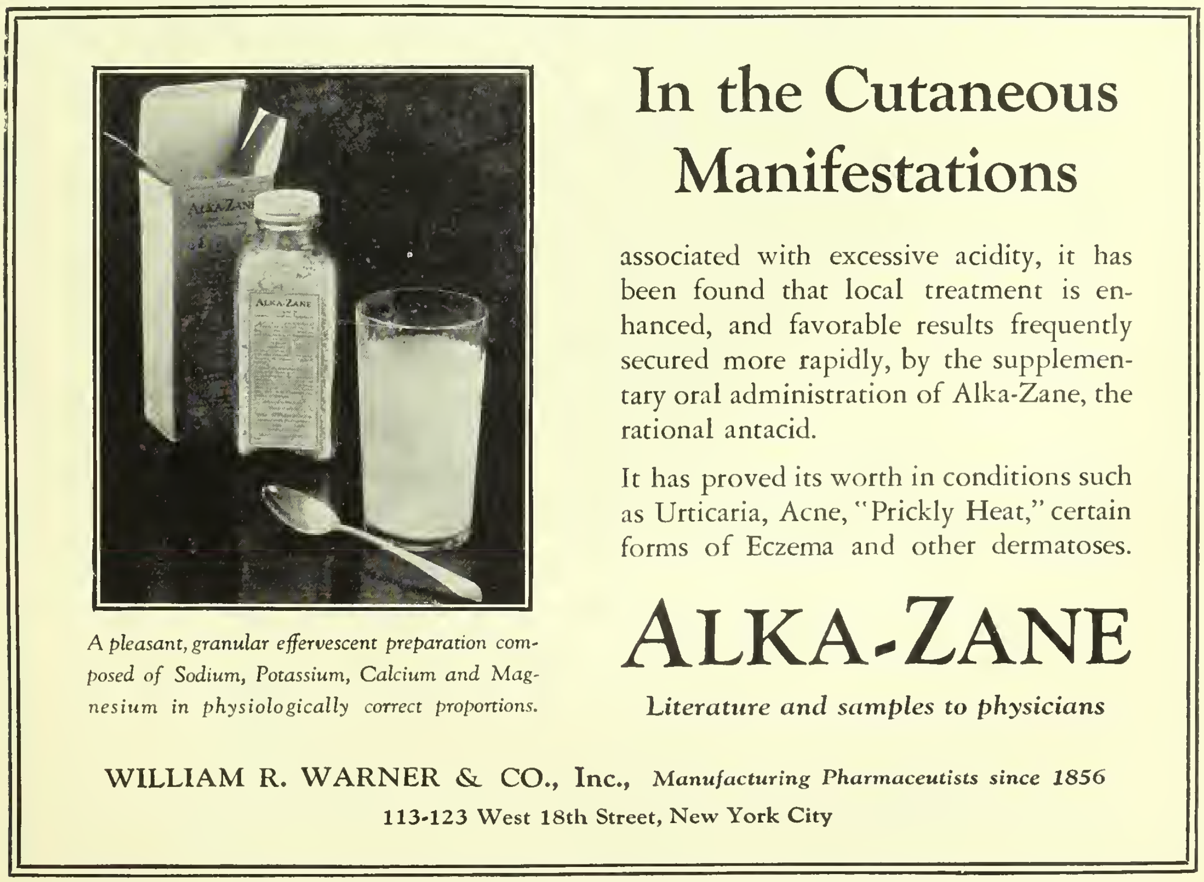

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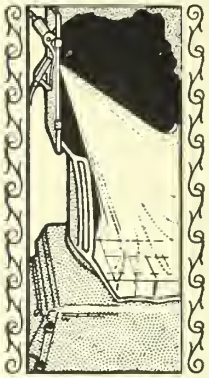

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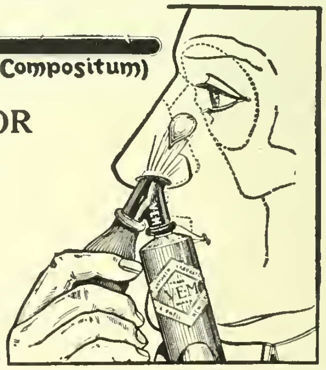

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REST HOSPITAL, MINNEAPOLIS

Rest Hospital is a home for medical and nervous cases. It is open to the patients of all reputable physicians. It is conducted by two registered and experienced nurses of long experience. M. R. Moran and Bea O'Brien, whose high standing in the medical profession of Minneapolis is known to the leading medical men of the city.

Drs. A. S. Hamilton and H. B. Hannah are the Medical Directors of the Hospital.

The Hospital is located in a fine residential district and is yet near the business district, namely, at 2527 Second Ave. South.

THE MINNEAPOLIS CLINICAL ASSOCIATION

The Minneapolis Clinical Association is a strictly co-operative group organized to render certain definite services to the medical profession both in and outside of Minneapolis. Such professional services fall under the following departments: X-Ray; Clinical Laboratories; Physiotherapy; and Business Department.

Each department is under the management of a chief and an assistant, with thoroughly competent and expert operators and complete equipment.

Already 110 members of the medical profession belong to the Association whose announcement appears on another page and should be read by every physician. Perhaps nowhere is to be found service of so high an order in the respective lines covered. The professional departments are prepared to offer assistance of great value to medical men; and the business department, because of its efficiency and integrity, should appeal to every doctor.

THE Northwest Clinic Laboratory desires to announce that its services are available to physicians and hospitals.

This laboratory is approved by the Council of Medical Education and Hospitals of the American Medical Association.

Standard methods and modern equipment are in use for the performance of all clinical laboratory procedures. These include, in addition to routine laboratory examinations, Wassermann tests, Kahn precipitin tests, preparation of autogenous vaccines, necropsies, examination of tissues by paraffin or frozen sections, chemical examination of blood, urine, feces, etc., and determination of basal metabolic rate.

Tubes, mailing containers, fee lists sent on request. Use special delivery stamps for prompt service. Provide brief clinical data, and indicate whether report is desired by wire collect.

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It is really notable in three or four respects: It is managed by a group of public-inspired women, who have shaped its general character since its foundation; its staff is composed of many of the leading surgeons and physicians in the city; its departments are under some of the foremost active and consulting specialists in the Northwest; its nurses' training school has maintained a standard of excellence in its graduates unsurpassed anywhere; its tradition of unstinted service has never failed.

The Superintendent of Northwestern is Mrs. Pearl Rexford, a registered nurse who is a graduate of the Hospital's own training school; and she will furnish any information desired.

TREATMENT OF LUMBAGO

The most frequent cause of lumbago is lumbar strain. The disease involves one or more joints and may extend to the sacro-iliac articulation. This condition must be carefully distinguished from arthritis of the spine, from sacro-iliac disease, and from deep-seated abscesses. The entire sacro-iliac region is very painful on pressure, on bending or turning, and thickenings are frequently found outside the muscle substance, which can be verified in the radiograph.

The most effective treatment of this condition (Wiener Klinische Wochenschrift, February 2, 1928) is rest in bed for from 8 to 14 days in a well-warmed room and with cutaneous counterirritation.

Physicians find that applications of hot antiphlogistine placed over the lumbar region for two or three hours every day for about two weeks usually bring marked relief in these painful conditions. Warm full baths are to be avoided. A flannel binder should be worn during the attack and is recommended for a month afterward to prevent a recurrence of the attack.

THE WAUKESHA SANITARIUM

The proper care and treatment of nervous diseases demand certain conditions even to promise success, at least in the case of most patients. Perhaps the first requisite in such a case is a new location or temporary home with cheerful surroundings and total absence of anxiety and confidence in the physician in charge of the case. To obtain these things is a big problem.

The Waukesha Springs Sanitarium, of Waukesha, Wisconsin, meets them as few other institution do. It has a beautiful building designed and equipped solely for this specific purpose and is located in a beautiful park, and the building is fire-proof. All the attendants in the Sanitarium are thoroughly trained for their work. The medical staff command the respect and confidence of the entire medical profession.

Such an institution cannot fail to produce the best results to be hoped for in its patients.

Correspondence with the Medical Director, Dr. Byron Caples, is cordially solicited.

PROSTATIC DYSFUNCTION

The earliest evidence that the prostate is a gland of internal secretion was advanced in 1907 by two French observers, MM. Serrallach and Pares. These investigators removed the prostate from dogs and found that cessation of spermatogenesis ensued, as well as gradual testicular atrophy. They then prepared glycerine extracts from fresh prostate glands, injected them into these animals, and found that the above-mentioned symptoms were alleviated.

Several authors have expressed the opinion that it is as possible for a menopause to take place in men as in women. In this connection Barnham says: "Man has his critical age of sex cell deterioration as well as woman. The age chart swings between forty-five nad fifty-five. Here enters upon the scene that organ of external and internal secretion, the prostate, the most important accessory sex gland in the male."

While men may not experience the hot flushes that women undergo during this period, they often suffer from constipation, headache, malaise, loss of appetite, loss of strength, lack of sexual power, insomnia, and all other symptoms that make up the so-called neurasthenic syndrome. Since ovarian substance is of value for women in the menopause, why might it not be advantageous to use prostatic substance for men in this period in whom the internal secretion of the prostate is presumed to be deficient? Clinical application shows that it is indeed possible.

The simple compensatory enlargement of the prostate which commonly occurs in men past middle age is amenable to this method. Many of the mechanical results of this condition are controlled by prostatic organotherapy.

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DISCOURAGED WOMEN

How often one meets them, nervous, a bit rundown, slightly anemic, really alive only two weeks out of every four! And the reason is probably in a stubborn disturbance of menstruation. Dysmenorrhea, for instance, or irregularity, is notoriously difficult to treat and often the physician contents himself with prescribing a sedative or some emmenagogue. It is surprising, though, what results can be achieved, even in obstinate cases by the use of a rational combination having both local and general tonic effect. Hyperol presents such a combination. Ethical, non-secret, it represents a prescription that will appeal to every experienced physician. Its advantage over the extemporaneously compounded one, lies in the quality of the drugs used, the standardization of quality and skill in manufacture, its unvarying potency. Full information, case reports and test supplies will be mailed to physicians requesting them on their letterheads. The Purdue Frederick Company, 135 Christopher Street, New York City.

KENILWORTH SANITARIUM

In 1909 the well-known neurologist, Dr. Sanger Brown, established at Kenilworth, Ill., a suburb of Chicago, a sanitarium for the treatment of mental and nervous diseases. An attractive park was landscaped and in it was erected an attractive building which was equipped with the latest of apparatus needed and helpful in such work. Sound-proof, sunny rooms with forced ventilation and every comfort found in a modern residence, were provided. These elegant appointments are exceedingly helpful in the treatment of nervous cases; but beyond all are the staff and the personnel of the attendants. While death may make changes here the spirit of the institution remains the same and its professional standards remain the same. Kenilworth Sanitarium does work of the highest order, and fortunate is the patient who finds a temporary home in this institution.

LIVER EXTRACT, FRACTION A5

Scientists have for some time known that liver, when taken as food, produces an effect upon certain vital processes of the body. This knowledge led Minot and Murphy, of Harvard University, to experiment on liver feeding in cases of uncomplicated pernicious anemia, and they reported its beneficial effect in bringing about blood regeneration.

Efforts have been made to isolate from liver the stimulant to blood regeneration in a form that might be administered as a medicine. Cohn and his coworkers at Harvard University, in July, 1927, reported the discovery, by chemical fractioning of the liver, of an alcohol-precipitable fraction containing the "active material effective in pernicious anemia."

These results have been verified by Dr. W. Herschel Knap, of the Medical Research Foundation at Frankford, Philadelphia, and the fraction which Doctor Knap has found to produce the same results as raw liver in pernicious anemia (Addison's anemia) is designated as Liver Extract, Fraction A5. This fraction is free of proteins, carbohydrates and lipoids.

Liver Extract, Fraction A5 for pernicious anemia is supplied in hermetically-sealed vials and in capsule form. For further information, address its manufacturer, H. K. Mulford Company, Philadelphia, Pa.

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